NATIONAL MUSEUM OF VICTORIA

THE JOURNAL of The Department OF AGRICULTURE

VICTORIA · · · AUSTRALIA

Vol. XXXV.—Part 9. SEPTEMBER, 1937. PRICE, 3D.

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Issued under the direction of the Hon. E. J. Hogan, M.L.A., Minister of Agriculture.

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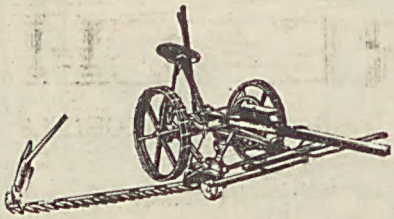

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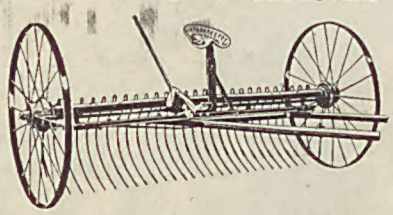

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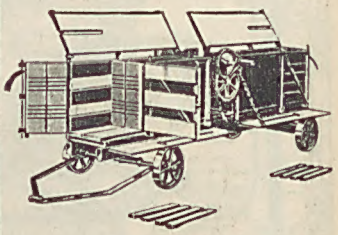

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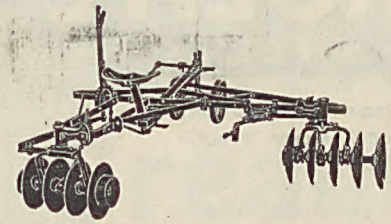

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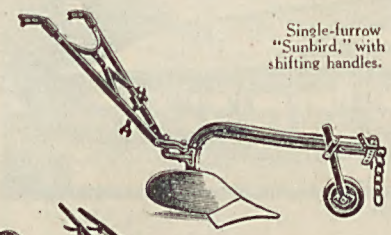
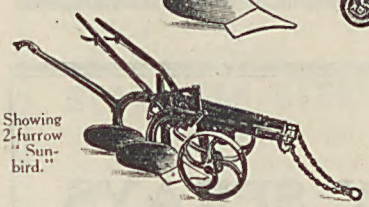


Single-furrow "Sunbird," with shifting handles.



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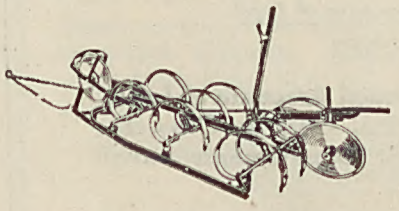

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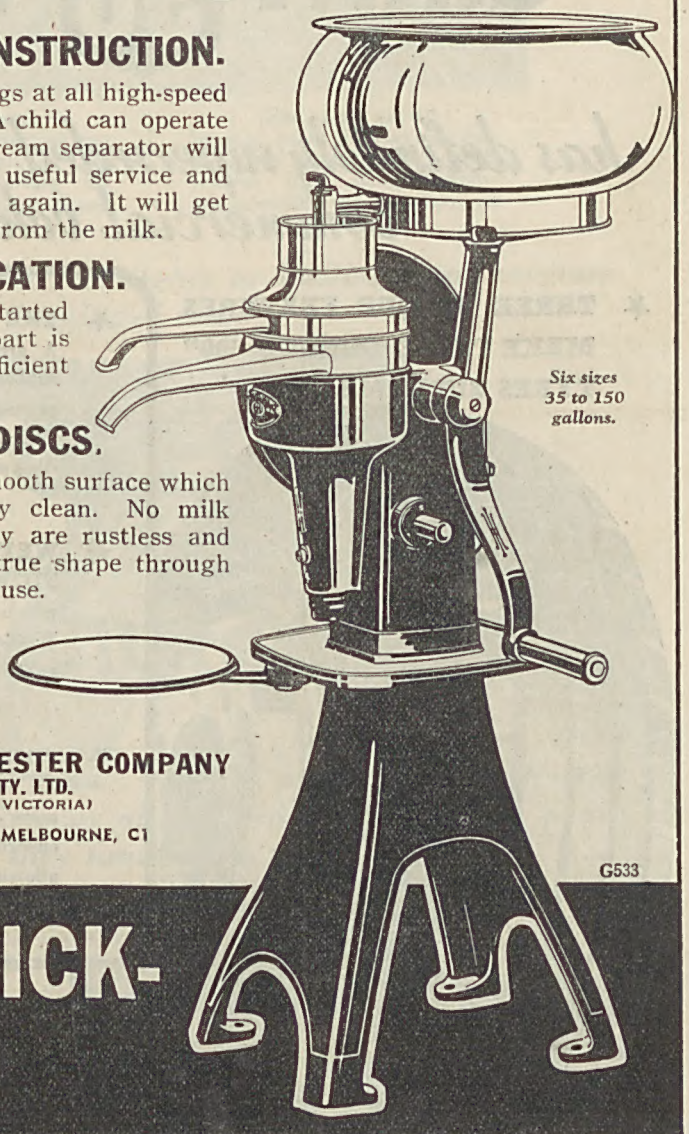

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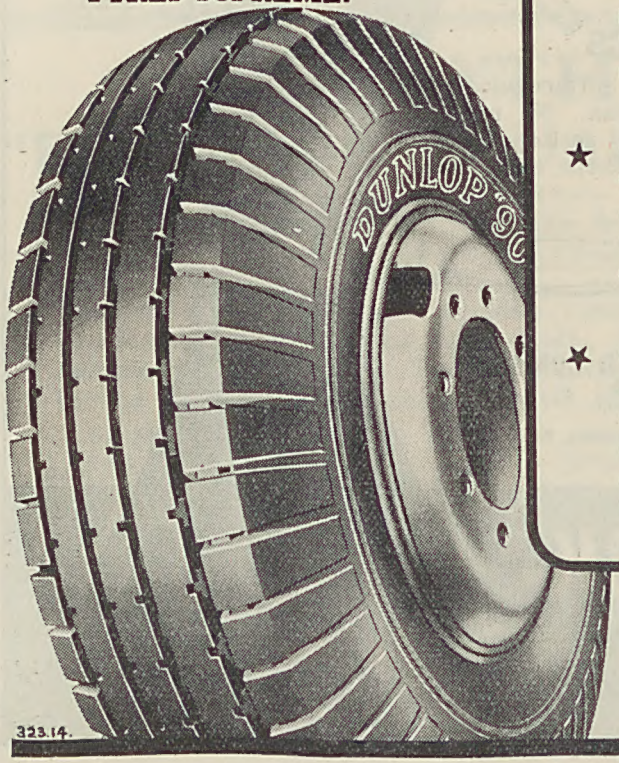

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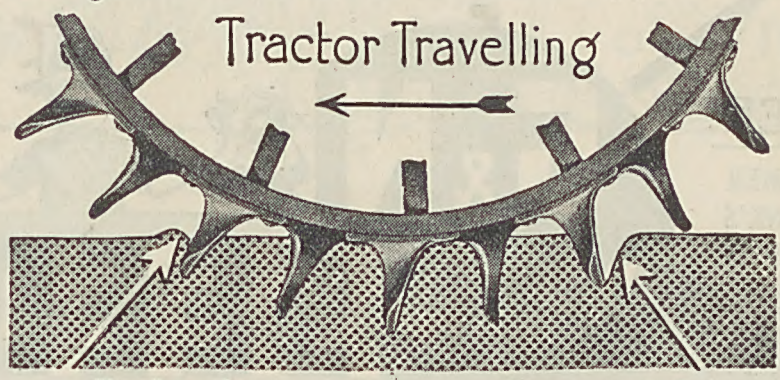

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NATIONAL MUSEUM OF VICTORIA

The Journal of the DEPARTMENT of AGRICULTURE of VICTORIA

Standard Herd Test

Report for Year 1936-37

By W. J. Yuill, Supervisor of Herd Testing

The Champion Cow.

THE unusually severe conditions of the autumn and winter of 1936 were reflected in the yields of the cows which completed their test periods in the early part of the year under review. The late pasture growth which followed this lean period suggested that a poor dairying season was inevitable, but splendid rains fell throughout the late spring and early summer, particularly in Southern Victoria, while districts north of the Dividing Range benefited to a lesser degree. The period of plenty which resulted from these abnormal rains was again followed by one of the driest autumns on record. This has again materially affected the early calving cows of the current year.

Although Victoria is the smallest State on the mainland, occupying only 3 per cent. of the total area of the Commonwealth, remarkable seasonal variations occur in the different portions of the State. Thus, for instance, it sometimes happens that a good season may occur in Southern Victoria, while the area north of the Dividing Range is experiencing severe drought conditions; indeed, this variation may occur even in the smaller area of Gippsland, for Eastern Gippsland sometimes passes through partial drought conditions, while Central and South Gippsland are enjoying a normal season. In these circumstances, it is difficult to compare the individual cow records, or even herd records, should the figures of any one season be relied upon. Despite these variable seasonal conditions, however, the leading herds of other years once again occupy the foremost positions in the Standard Herd Test and one of these has created a new high record for a Standard Test herd.

In the 1935–36 Standard Test the "Mornmoot" Jersey Herd of Mr. R. M. Chirnside, Whittlesea, established a new record herd average—his fifteen entries returning an average yield of 614 lb. butter-fat (inclusive of allowances.) This average was only 0·3 lb. better than that of the sixteen Jersey cows of Mr. N. H. Enders. As the latter's herd had a slightly better actual average yield, it might be said

Some high producing individuals of Mr. R. M. Chirnside's Champion Herd. From left to Right.—"Werribee Princess Satisfaction," "Mornmoot Clementine," "M. Princess Madeira 3rd," "M. Satisfaction," "M. Fancy Starbright."

that, for all practical purposes, the honours were shared by these two great herds.

In the 1936–37 test, however, the "Mornmoot" Herd has broken its own record, the seventeen cows having yielded an average of 650 lb. butter-fat, an increase of 36 lb. per cow over the previous record. The actual yield for the herd without allowances was 598 lb. or 63 lb. per cow more than the previous year's average. So far as can be ascertained, these figures constitute an Australasian record for a herd of seventeen or more cows, milked twice daily during a 273-day test period. The herd is remarkable in many ways, for with the exception of three cows, all the test animals were less than five years old when the herd began its record year's work. No less than six of them filled places in the best four of the various classes. The leading two animals in the senior two-year-old, junior three-year-old, and senior three-year-old classes, and the leading four in the senior four-year-old class are all members of the champion herd. Mr. Chirnside's Mornmoot Herd has been prominent in the list of herd averages for a number of years past, having filled the leading position during the past three years, a feat unequalled by any other herd during the twenty-six years of the Standard Herd Test.

Members of Capt. A. E. T. Payne's "Yarraview" Guernseys.

Reserve Champion Herd.

Mr. P. J. Maloney's famous "Belgonia" Stud was represented by a herd of eighteen cows. Their butter-fat yield of 471 lb. (529 lb. with allowances) was a slightly better effort than that of the previous year. The Belgonia Stud has supplied the champion herd on three occasions, and this is the third time that it has held the Reserve Championship. The history of this stud is told elsewhere in this report.

Mr. J. D. Read's "Springhurst" Jerseys again occupy the leading position in the section for herds of more than 25 cows, his 31 entries averaging 495 lb. (with allowances). They are also placed third on the list for the Standard Herd Prize.

In all, nine herds exceeded the level of 400 lb. actual butter-fat. These include the Clarendon Eyre Stud, J. E. Handbury and Sons No. 1 farm, the Friesian Herd at the Werribee Research Farm, and three smaller herds—those of Messrs. N. H. Enders, T. M. Noble and Sons, and J. G. Norman. The herds of Messrs. E. Hore of Leitchville, and E. J. Vagg of Leongatha, returned actual yields which exceeded 390 lb. butter-fat.

Capt. A. E. T. Payne's Guernseys were second in the large herd section with a 380-lb. average yield (445 lb. with allowances), Mr. J. A. Huffer's

Glen Valley Herd being close up with 376 lb. butter-fat (425 lb. with allowances). Mr. W. K. Atkinson's Dairy Shorthorns and the Banyule Jerseys each had similar figures both for herd size and butter-fat (when allowances were added). The Selsey and the Sylvan Hill Jerseys also exceeded the 350-lb. butter-fat level.

The new conditions governing the Standard Herd Test preclude any herd of less than fifteen cows from competing for the herd championship prizes. The minimum was raised because it was considered that the competition should be open only to herds of a size in keeping with the number of cows required by a dairy-farmer to make a living. Some fine performances were made by herds that were below the new minimum herd size. "The Wattles" Stud of thirteen cows leads in this section, and is represented in two of the classes by "The Wattles Pearl 3rd" (549 lb. butter-fat as a junior four-year-old) and "The Wattles Petal" (a 437 lb. junior two-year-old). Messrs. T. M. Noble and Sons' "Finchley" herd has moved up from fifth to second place. Mr. J. G. Norman's "Banaview" Herd marked its reappearance in the test with a record of 436 lb. butter-fat, which gains for it third place in the small herd section. The Jersey herds of Messrs. W. H. Hurrey and R. G. Gay and Son did well, as did also the Dairy Shorthorns of Messrs. Meaklim Bros. and the Dookie Agricultural College Ayrshires. Of the 143 herds which were tested during the year, 31 exceeded the 400-lb. level when all allowances were added.

Champion Cow.

For the second year in succession Mr. R. M. Chirnside's "Mornmoot Princess Madeira" has secured the Standard Herd Test Champion Prize, and, therefore, has qualified in two of the three years necessary to secure the £100 Special Prize, which is awarded by the Government to the cow that wins this title on three occasions—not necessarily in succession. This prize was previously won by "Cherry of Willow Park" with records of 737, 727, and 636 lb. butter-fat. As a senior three-year-old "Mornmoot Princess Madeira" produced 773 lb. butter-fat, following this with a senior four-year-old record of 794 lb.

This wonderful cow has made a bold bid for a third successive championship as she recently completed her lactation for the current year's test with exactly the same yield as last year, i.e., 794 lb. This figure, however, has been

Some of Mr. J. D. Read's Springhurst Jerseys which occupied the leading position in the section for herds of more than 25 cows.

Mr. R. M. Chirnside's Champion Cow, "Mornmoot Princess Madeira," 794 lb. butter-fat as a senior four-year-old.

exceeded by that of an Ayrshire cow which finished the current year's test period with a return of 794·5 lb. butter-fat. "Mornmoot Princess Madeira," however, still has an excellent chance of winning the special prize as she is as yet only 6½ years old. To date she has yielded more than 1½ ton of butter-fat.

The 1937 Champion Cow is a splendid example of a "two-way" Jersey. Although lacking any suspicion of coarseness, she is a big cow, as is shown by her weight at the 1936 Royal Show, when she turned the scale at 9 cwt. She has good length and depth of barrel, and is a great feeder. She has a characteristic Jersey head and a good top-line, while her rump and udder leave little to be desired—although her dam was weak in this respect. Madeira gained first place in the Type and Utility Section at the 1936 Royal Show, but was unplaced in the open class, where the judges consider breed beauty of more importance than breed utility. It is pleasing to record, however, that the classification board of the Victorian Jersey Herd Society awarded her a "Highly Commended" ranking. Six representatives of the Madeira family are to be found among the placed animals of this year's classes. Further reference will be made to this great family.

"Jerseyinn Edith 2nd," the Reserve Champion Cow owned by Mr. E. J. Vagg. 750 lb. butter-fat.

The Reserve Champion Cow is "Jerseyinn Edith 2nd" owned by Mr. E. J. Vagg of Leongatha. It was found necessary to milk her thrice daily during the early part of the test, and her yield of course, would be influenced by this fact. That she is a very honest performer is seen by her previous records of 678 and 608 lb. butter-fat. She was closely followed by

Mr. R. Chirnside's "Werribee Princess Satisfaction" with a 744-lb. record, which was preceded by yields of 712, 680, 595, and 587 lb. butter-fat. These performances stamp her as being a really great representative of the breed.

"Mornmoot Princess Madeira 3rd," a senior three-year-old daughter of the State Champion Cow, yielded 721 lb. butter-fat, while "Mornmoot Princess Madeira 5th," her maternal half-sister,

Udder of the Champion Cow, one month after completing test.

was placed second in the senior two-year-old class with the excellent yield of 571 lb. butter-fat.

Of the 84 cows which exceeded the 500-lb. level, there were twelve over 600 lb. (in addition to the four "700 pounders"). Four of these are members of the Champion Herd, viz:—"Ballara Starbright 6th" (646 lb.); "Mornmoot Fancy Madeira" (607 lb.); "Mornmoot Fancy Starbright" (624 lb.); and "Mornmoot Northwood Madeira 4th" (603 lb. butter-fat).

"Victoria Chorus Girl," a Friesian cow owned by the Werribee Research Farm, followed a previous 500 lb. effort with 652 lb. butter-fat. She is the only representative of this great breed among the class place-getters. "Belgonia Eileen 2nd" (620 lb.) represents the Reserve Champion Herd.

"Mornmoot Princess Madeira 3rd," 721 lb. butter-fat as a senior three-year-old.

Among the newer testing owners to be represented in the age classes is Mr. F. W. Clarke of Toora. His mature cow, "Hazelgrange Mistress," put up the excellent showing of 673 lb. butter-fat, while his senior two-year-old "Mer Vue Joy" filled third place in its class with the splendid yield of 522 lb. butter-fat.

Another breeder who is forging to the front is Mr. E. Hore of Leitchville. His Welsh-named cow "Troed-Yr-Rhiw-Bettwys 2nd" was third in the junior four-year-old class, with 590 lb. butter-fat, while "Tavistock Larkspur" exceeded 500 lb. as a senior two-year-old. "Monterey Maid's Mermaid," whose 442 lb. record gained second place in the junior two-year-olds, is also owned by a new comer to the Standard Test in Mr. T. S. Powell of Mansfield.

It is pleasing to record further considerable progress by representatives of the Ayrshire breed. The Dookie Agricultural College herd average of 385 lb. butter-fat for the past year was a fine effort following a 414-lb. average of the previous year. Their leading junior cow "Sparkle" gained fourth place in the senior three-year-old class with a record of 544 lb., while the top yielder of the herd, "Sappho,"

"Victoria Chorus Girl," 652 lb. butter-fat.

bears the distinction of being the second Ayrshire cow to join the list of "long distance" producers with a five years' average of 514 lb. butter-fat.

The herds of Messrs. G. A. Fraser, B. G. Tomasetti, F. Pattison, and Thomas and Taylor all exceeded 350 lb. "nominal" butter-fat. Mr. J. H. Goddard's "Donside" Ayrshires are also showing out well. Two of his cows, "Donside Lydo Lady" and "Donside Thistledown 2nd," have each exceeded 600 lb. butter-fat, while "Inveruarie Heather 2nd," a daughter of "Thistledown 2nd," yielded 420 lb. butter-fat on her first calf.

Much is expected of Mr. G. A. Fraser's herd, which provided the leading junior two-year-old of this year's test. His cows "Bonnie Doon Heather" and "Glengowrie Ray" both exceeded the 600-lb. butter-fat mark; while the last-named cow has just completed a record of 794·5 lb. which is 102 lb. higher than the breed record held by "Poppy of Ben Kell" since 1923.

It is to be regretted that the Friesian breeders do not support the Standard Herd Test more, for no dairy breed has a greater history, or a more striking background when world record yields are being considered. If this breed is to make headway, the dairy farmers must be shown the real capabilities of the breed. Despite the disabilities of much changing of milkers, and being handled in a very large herd, the average of the "Victoria" Friesians exceeded 400 lb. actual butter-fat, in spite of the fact that only one-third of the herd were mature cows.

Mr. T. Sebire's "Wandin Cream Piece," 609 lb. butter-fat.

SOME LEADING COWS.

(See plate on opposite page.)

1. Mr. R. M. Chirnside's senior three-year-old Jersey "Mornmoot Northwood Madeira 4th", 603 lb. butter-fat. 2. Mr. R. M. Chirnside's "Mornmoot Fancy Madeira", 607 lb. butter-fat as a senior four-year-old. 3. "Mornmoot Fancy Starbright", a junior three-year-old Jersey owned by Mr. R. M. Chirnside. 4. Mr. G. A. Fraser's "Glengowrie Ray" who recently broke the Victorian Ayrshire record by more than 100 lb., raising it to 794·5 lb. butter-fat. 5. Mr. N. H. Enders' mature Jersey "Rintoul View Moleen", 641 lb. butter-fat. 6. Portion of the Ayrshire herd at Dookie College. 7. Mr. F. W. Clarke's "Hazelgrange Mistress", 673 lb. as a mature Jersey. 8. Mr. R. M. Chirnside's mature Jersey "Mornmoot Northwood Madeira", 643 lb. butter-fat. 9. Mr. P. J. Maloney's junior four-year-old Jersey "Belgonia Eileen 2nd", 620 lb. butter-fat.

Mr. R. M. Chirnside's "Ballara Starbright 6th," 646 lb. butter-fat as a Senior four-year-old.

Carracoorte Ayrshires.

Despite his 76 years, Mr. W. Henderson, the owner of "Carracoorte," still takes a lively interest in his select herd of Ayrshires. More than half a century ago, he went to manage the cheese factory, and the 140 cow dairy herd on the property which he now owns as well as two share dairy farms. At all times he has remained a staunch advocate of the old ideas of stud farming. He looks askance at "steaming up" methods of producing cow-records, and he does not subscribe to the use of concentrates for his test-cows, except in limited quantities during the autumn and winter period. He has no doubt as to the ability of his cows to make much higher records than they do, and thus secure greater publicity but, although some of the younger Ayrshire breeders would like to see what the Carracoorte Ayrshires could yield on a full test ration, they are not likely to be satisfied, for Mr. Henderson sells his surplus stock well, and is satisfied with his system of management, which includes much attention to his brood mares, and stud Lincolns which run with the dairy herd.

For many years he has been preoccupied with the task of breeding a high testing Ayrshire

Some Leading Cows

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herd, for he long ago faced up to the fact that a high-testing small breed can hold its own with a much larger low-testing one, providing it is a persistent milking breed. That he has largely succeeded in his endeavours may be seen by the figures of the Standard Herd Test, which show that, over 140 lactations, "Carracoorte" cows have a test that is three-quarters of one per cent. higher than the average of the breed. These include over forty which averaged better than 5 per cent.; the highest testing cow being "Brownie's Belle," which tested 6·01, 5·92, 5·41, and 5·18 on her four lactations to date; her best yield being 8,151 lb. milk with 5·96 per cent. test, equivalent to 483 lb. butter-fat. The "Brownie's" and the "Gertie's" have

"Brownie's Pet."

shown the high test character in an unusual degree; fifteen tested individuals of these families have all tested over 4·7 per cent., while eight have exceeded 5 per cent. butter-fat.

It is interesting to try and discover where this high test character originated. The original "Gerty" tested 5·16 per cent., while "Brownie 2nd" tested 5·2 per cent. A perusal of their pedigrees, show that they are closely bred to Alice's Jamie of Oakbank (234 A.H.B.). This is best shown in the accompanying short pedigrees.

C. Brownie 2nd 5·2 per cent. test
- Minerva's Jamie of Warrook, by Alice's Jamie of Oakbank
- Brownie of Warrook, by Fashion Plate, by Alice's Jamie of Oakbank

"Brownie" is by a son of Alice's Jamie, and out of a grand-daughter of Alice's Jamie of Oakbank.

C. Gerty 5·16 per cent. test
- George of Warrook (707)
  - Fashion Plate, by "A. J. of Oakbank"
  - Grace, by "A. J. of Oakbank"
- Gerty of Warrook (2243)
  - Fashionable by "A. J. of Oakbank"
  - Gertrude by "A. J. of Oakbank

"Brownie's Belle."

It will be noticed that the dam of "C. Gerty" is from a half-sister and half-brother mating, both being by Alice's Jamie of Oakbank—while his sire is similarly bred—in other words, "C. Gerty" has but one great-grandsire, where four usually occur.

"Gerty's Producer," a successful bull at Carracoorte, is a son of "Gerty" (eight of his daughters tested above 4.8 per cent.). "Carracoorte Victor 2nd" is by "George of Warrook," a close-bred son of Alice's Jamie of Oakbank. He has a number of daughters testing above 4·7 per cent. (three being over 5 per cent.), while "C. Pilot," a son of "Gerty's Producer," had similar results.

Mr. Henderson joined the Standard Herd Test in 1920, when his nine cows (with junior allowances) could average only 284 lb. butter-fat. In the following year the cows on the share dairy farm were also entered; but of the 87

Mr. G. A. Fraser's "Bonnie Doon Beth," leading junior two-year-old 452 lb. butter-fat.

tested, only 24 secured their certificate—their average yield, with heifer allowances, being 314 lb. As time went on, certain families were deregistered, and the best families concentrated at the homestead. In 1935, thirty-six cows

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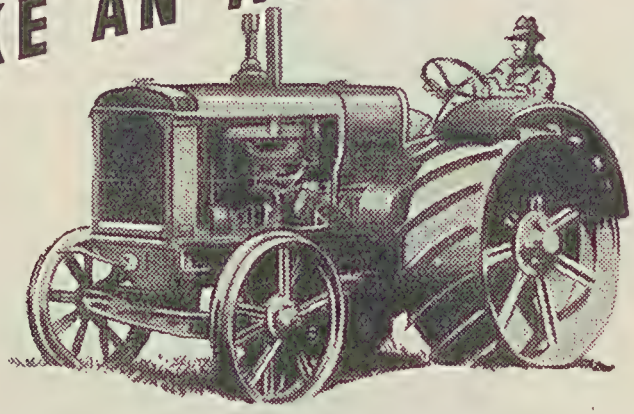

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averaged 383 lb., with allowances for junior cows, while in the unfavorable year which followed, the herd averaged 378 lb.

A 400-lb. record made in a 29-inch rainfall, under the rather exacting test conditions which prevail at "Carracoorte," must be appreciated. "Bluebell of Warrook" once exceeded 500 lb. butter-fat, and it is interesting to note that "Iris 11th," by her son "Bluebell's Pride of Glencourt," just missed the 500-lb. mark by 2 lb. Many other cows have produced well above the 400-lb. level.

Mr. Henderson does not rug his cows, nor do they receive any treatment that is not usually found on a commercial dairy farm. Attention is given to the size feature, for if the breed is to compete successfully with other breeds, the size must be kept up, especially if the average test is low.

The only other avenues for the breeder to exploit are high milk yield, and consistency of yield over a long lactation, and the breed certainly can be improved in these characters. Carracoorte cows generally have size without coarseness, a fact shown in the accompanying photographs.

Who has not heard of the short-teated character of the Ayrshire breed? This is quite an unwarranted charge when levelled against the breed as a whole although it is still true of some families, as it is in certain other breeds. At Carracoorte, by rigid selection, a high degree of purity has been gained in this "good teat character"; in addition to the square, well set on udder, which is more true of the Ayrshire breed than of any other. Mr. Henderson offers the opinion that high test goes with brown colour. It is certainly true of his "Brownie" family, but this may well prove to be a coincidence as was the case of the black muzzled Polish cattle investigated by Professor Prawochenski, who found that there was apparently no difference in the test of black or white muzzled cows. "Poppy of Ben Kell," the breed's State champion, had a high average test as well as the high yield, but she was not a brown cow.

Mr. Henderson has a keen admiration for a good-looking Ayrshire cow, but his long years of experience with large numbers of Ayrshire cattle have led him to the definite conclusion that good form and good function may or may not be associated in the same cow. His highest yielding Ayrshire lacked good looks, while some good-looking cows lacked good yields. Sometimes both appeared in the same cow, as in "Brownie's Belle," the present high testing, high yielder, of the herd. Both are good "two-way" Ayrshires, for they have pleasing form, and good productive ability.

Bulls from this stud have gone into many commercial herds, and given satisfactory results. "Carracoorte" cows also have given good results

Some of the present herd of Carracoorte Ayrshires.

in other hands, when not in competition with horses and sheep for the pastures. At Messrs Thomas and Taylor's stud at Strathkellar, where the land is much inferior to Carracoorte, cows bred by Mr. Henderson are doing particularly well. The list of long distance cows (see opposite) shows that Carracoorte Ayrshires can keep on working over extended periods and produce good average yields, although no attempt is made to provide special test conditions.

Mr. Henderson set out to develop *by selection* a high testing herd of the breed which he fancies most. Selection is the method that has been employed by all herd improvers throughout the ages but, unfortunately, very few men are as courageous as Mr. Henderson in culling out the "not wanted" animal. He deregistered a large number when he finally set about developing the herd now at "Carracoorte." That there are high levels of production in this breed is evident from the consistent winning of the milking trials at the recent English Dairy Shows. It is also the popular breed in Sweden where approximately 30 per cent. of the tested cows exceed 400 lb. butter-fat per annum.

LONG DISTANCE CARRACOORTE COWS.

Name of Cow.	Number of Records and Average Yield.		Best Record.
	lb. butter-fat.		lb. butter-fat.
Gerty 3rd	8	328	452
Gertrude	7	349	414
Brownie's Belle ..	4	372	483
Bellona 4th	7	372	420
Lucy 7th	4	356	447
Balm 44th	8	325	473
Iris 2nd	7	321	444
Iris 4th	7	343	431
Iris 5th	6	365	462
Iris 11th	6	350	498
Viola 7th	5	349	403
Viola 9th	3	371	466

"Belgonia" Jerseys.

A brief outline of the history of Mr. P. J. Maloney's "Belgonia" Stud may interest some and even inspire others. When he returned from the war in 1916, Mr. Maloney immediately applied for and secured a block of 43 acres of land in

CLASS LEADERS

Class.	Name of Cow.	Owner.	Breed.	Butter-fat
				lb.
Junior 2	Bonnie Doon Beth	G. A. Fraser	Ayrshire	452
Junior 2	Monterey Maid's Mermaid	T. S. Powell	Jersey	442
Junior 2	The Wattles Petal	N. H. Enders	Jersey	437
Junior 2	Springhurst Sybil Aconite	J. D. Read	Jersey	436
Senior 2	Mornmoot Princess Madeira 2nd	R. M. Chirnside	Jersey	584
Senior 2	Mornmoot Princess Madeira 5th	R. M. Chirnside	Jersey	571
Senior 2	Mer Vue Joy	F. W. Clarke	Jersey	522
Senior 2	Tavistock Larkspur	E. Hore	Jersey	501
Junior 3	Mornmoot Fancy Starbright	R. M. Chirnside	Jersey	624
Junior 3	Mornmoot Northwood Madeira 4th ..	R. M. Chirnside	Jersey	603
Junior 3	Bamawm Primrose	F. A. Williams	Jersey	582
Junior 3	Springhurst Sybil Nerine	J. D. Read	Jersey	543
Junior 3	Belgonia Duke's Buttercup	P. J. Maloney	Jersey	543
Senior 3	Mornmoot Princess Madeira 3rd	R. M. Chirnside	Jersey	721
Senior 3	Mornmoot Clementine	R. M. Chirnside	Jersey	563
Senior 3	Koorcena Carrie 4th	W. H. Hurrey	Jersey	546
Senior 3	Dookie Sparkle	Dookie College	Ayrshire	544
Junior 4	Belgonia Eileen 2nd	P. J. Maloney	Jersey	620
Junior 4	Wandin Cream Piece	T. Sebire	Jersey	609
Junior 4	Troed-Rhiw-Bettwys 2nd	E. Hore	Jersey	590
Junior 4	The Wattles Pearl 3rd	N. H. Enders	Jersey	549
Senior 4	Mornmoot Princess Madeira	R. M. Chirnside	Jersey	794
Senior 4	Ballara Starbright 6th	R. M. Chirnside	Jersey	646
Senior 4	Mornmoot Fancy Madeira	R. M. Chirnside	Jersey	607
Senior 4	Staghorn Royal Lotus	R. M. Chirnside	Jersey	575
Mature ..	Jerseyinn Edith 2nd	E. J. Vagg	Jersey	750
Mature ..	Werribee Princess Satisfaction	R. M. Chirnside	Jersey	744
Mature ..	Hazelgrange Mistress	F. W. Clarke	Jersey	673
Mature ..	Victoria Chorus Girl	Department of Agriculture, Werribee	Friesian	652

"Belgonia Peggy 6th," the outstanding member of the "Peggy" family.

the Tongala irrigation settlement. This small farm subsequently loomed large in the history of the Standard Herd Test and its herd gained great prominence among the tested pure bred herds of the Commonwealth. The actual grazing area of the farm is not more than 38 acres, all of which has been sown down with lucerne. There are eleven grazing paddocks on this small farm, one area of eight acres being mainly reserved for the cutting of lucerne for hay. As the lucerne paddocks thin out, they are scarified in the late autumn with oats or barley and grazed through to the following spring. Some paddocks have developed excellent pastures, a prominent feature being the development of the local strain of white clover. Superphosphate is liberally applied to all crops, particularly the lucerne and pasture.

Originally the block carried sixteen nondescript cows, a bull and two horses. Compared with this, there were carried through the main portion of the 1936–37 season no less than 60 head of registered Jerseys of various ages, including 30 milking cows and a stud bull, also two horses. Just prior to my visit to the farm in April, the growing stock had been removed to another block, so that ample green feeding might be available for the Official Test cows. There was no evidence of over-stocking and ample reserves of hay were held.

About 1917, Mr. Maloney read an article in the *Journal of Agriculture* which undoubtedly had a far reaching influence on his future. This article dealt with herd testing. Shortly afterwards he began to test his herd and quickly found that it was not always the likely looking cow that gave the greatest quantity of milk and butter-fat; after twenty year's experience he is still of this opinion.

In 1918, Mr. Maloney purchased three registered Jerseys, "Beauty", "Marie" and "Buttercup of Bonshaw", and as money was available the nondescript cows were replaced by other registered pure-breds. Subsequently "Wattle", "Czarina" and "Balsam of Springhurst" were added to the herd and, later, "Our Choice" and "Romany Girl of Tarnpirr". The first herd sire was "Hedge of Banyule", ex Hawthorn 4th a 490 lb. cow, his sire being the famous "Audrey Lord Twylish". This bull was later followed by "Aerial of Banyule", a son of "Silvermine 23rd" and the imported bull "Wooton Airman".

It will be seen that the foundation stock purchased by Mr. Maloney was largely made up of three famous Standard Test herds, viz.—Banyule, Springhurst, and Tarnpirr; while Marie and Beauty of Bonshaw were sired by "Laddie 2nd of Banyule" and "Buttercup" by "The Pilot of Tarnpirr."

What Mr. Maloney achieved at Belgonia is best shown by the fact that, prior to his disposal sale in 1929, the Belgonia Jersey Stud had twice won the Champion Herd Prize, and was Reserve Champion Herd on two other occasions. In 1934, his new herd was successful in carrying off the Champion Test Prize.

Although the herd did not come up to the owner's idea of Jersey excellence, it was largely successful in the show ring. This is best seen by the 35 champion prizes, 6 reserves, and 120 first prizes, six of which were gained at Melbourne; while on four occasions it was the State champion Jersey herd under Test. Both "Hedge" and "Aerial" were extensively shown with much success, each winning many championships.

In 1930, Mr. Maloney decided to visit Jersey Island and secure animals of higher breed quality. He returned with "Gem's Noella" and "Suspense," the latter carrying the heifer calf now known as "Belgonia Suspense". Two bulls, viz.—"Duke of the Lake" and "Design's Ruler" were also imported by him. The imported cows, together with Peggy 6th and Marie 4th, two heifers that

were retained from the original herd, formed the nucleus of the present stud of approximately 80 individuals of various ages.

The new herd has been particularly prominent at the leading shows of the State. Design's Ruler was the 1937 champion at Sydney, and was previously champion and twice reserve champion at the Royal Show, Melbourne. "Gem's Noella" proved to be an excellent producer, having four times exceeded 500 lb. butter-fat, while her daughter, by Design's Ruler, is at present making her best record, which should exceed 500 lb. Another daughter by "Duke of the Lake" produced 468 lb. as a junior two-year-old. "Suspense" once exceeded 600 lb. butter-fat, and has averaged 541 lb. butter-fat for five years. "Belgonia Suspense" averaged 471 lb. butter-fat over three junior records, twice missing the 500 lb. mark by 1 lb. butter-fat.

There are many other fine cows in the stud, whose records are to be seen in the Standard Herd Test Report of the Belgonia Herd. "Levon Brae Perree's Girl" by "Werribee Gaypiece" is a particularly nice cow with six records averaging over 500 lb. butter-fat.

There are several Eileen's in the herd, which combine breed—type, and production. "Eileen 2nd" by "Duke of the Lake" averaged 536 lb. in her first three lactations and is an outstanding member of the family. "Belgonia Marie 4th" is a remarkably consistent producer as is shown by her nine-year average yield of 516 lb. butter-fat. On one occasion she missed the 600 lb. mark by 2 lb. butter-fat. There are several promising individuals in this family by the imported bulls. The family goes back to "Marie of Bonshaw," who was by "Laddie of Banyule." Her best daughter is "Belgonia Marie 2nd," whose six years' average yield is 472 lb. butter-fat. "Marie 4th" and "Marie 5th" are full sisters ex. "Belgonia Marie 2nd," their sire being "Aerial of Banyule" whose dam, "Silvermine

A Progeny and Production Chart of the Descendants of Beauty of Belgonia Featuring the "Belgonia Peggys."

Beauty of Belgonia (9548) 4 years average 415 lb. butter-fat. — *Sire, Butterlad of Bonshaw. Dam, Beauty 2nd of Bonshaw, 4 years average yield 346 lb. butter-fat.*

"Peggy of Belgonia" (17799) by "Prince of Belgonia"
4 years' average yield 506 lb. butter-fat; best record 570 lb.
First and Champion at Tatura and Kyabram
First Type and Utility class Melbourne, Tatura, and Kyabram

"Belgonia Peggy's Twylish" (5443) by "Bright Twylish of Belgonia"

"Belgonia Propellor" (5776) by "Aerial of Banyule"

"The Wattles Biplane" (8750) by "Banyule Triplane"

"Macroom Peggy" (44993) by "Battery of Belgonia"
4 years' average yield 349 lb. butter-fat; best record 490 lb.

"Macroom Peggy 3rd" by "Glen Alvie Statesman"
245 lb. butter-fat as Junior 2-year-old

"Macroom Peggy 2nd"
Not tested owing to injury

"Macroom Beau Ideal" by "Belgonia Battery"

"Peggy 4th of Belgonia" (24493) by "Aerial of Banyule" (409 lb. butter-fat as Junior 2-year-old)
First prize Melbourne Royal Show
Second Type and Utility Melbourne Royal Show

"Belgonia Peggy 7th" (33273) by "Aerial of Banyule"
4 years' average yield 392 lb. butter-fat; best record 448 lb.
(Sold to J. J. Desmond, "Macroom" Jersey Stud)

"Belgonia Peggy 8th" (33245) by "Belgonia Stumpy's Twylish"
(Sold)

"Warrawee Peggy" (46628) by "Banyule Tympani"
4 years' average 300 lb. butter-fat; best record 340 lb.

"Belgonia Peggy 9th" by "Aveley Rex"
5 years' average 448 lb. butter-fat; top record 540 lb.

"Peggy 3rd of Belgonia" (21493) by "Bright Twylish of Belgonia"
4 years' average yield 456 lb. butter-fat; best record 547 lb.
First at Bendigo, Kyabram, Tatura, and Shepparton
First Type and Utility section, Melbourne

"Belgonia Peggy 6th" (29117) by "Aerial of Banyule"
6 years' average yield 552 lb. butter-fat; best record 617 lb.
First and Champion of State 1933, and first in the Type and Utility class; also Champion Jersey and dairy cow at many leading country shows

"Belgonia Peggy 10th" by "Averley Rex"
3 years' average 477 lb. butter-fat; top record 491 lb.
Twice first at Melbourne R.A.S.

"Belgonia Peggy 11th" by "Duke of the Lake" (imp.)
3 years' average 435 lb. butter-fat; top record 497 lb.

"Warrawee Peggy 2nd" by "Warrawee Bellboy," owned by J. Pearson, Gippsland

"Belgonia Designs Peggy 13th" by "Design's Ruler" (imp.)
First Melbourne R.A.S. (now under test)

"Stumpy's of Belgonia" (13756) by "Hedge of Belgonia"
8 years' average yield 395 lb. butter-fat; best record 498 lb.
First and Champion at several shows in the Goulburn Valley, and second at Melbourne
(Sold to H. A. Schier)

"Belgonia Stumpy's Twylish" (6763) by "Bright Twylish of Belgonia"

"Belgonia Stumpy 3rd" by "Aerial of Banyule"
4 years' average yield 328 lb.; best record 358 lb.

"Belgonia Battery" (5969) by "Aerial of Banyule"
(Sold to J. J. Desmond)

"Green View Velvet" (44193) by "Burnside Conquest"

Some of Mr. P. J. Maloney's Belgonia herd.—1. "Belgonia Peggy 11th," 2. From left to right.—"Design's Marie 2nd," "Design's Lady," "Design's Noella," "Belgonia Peggy," 3. "Beauty of Belgonia," the foundation cow of the Belgonia "Peggys," 4. "Belgonia Peggy 15th," 5. "Belgonia Peggy 16th."

23rd" was a 523 lb. butter-fat cow. "Marie 6th" is a daughter of "Marie 4th"; she is by "Belgonia Battery," a son of "Aerial" and "Stumpy of Belgonia." The dam of "Stumpy" was "Beauty of Belgonia" which also bred the well-known "Peggy" family.

The "Marie's" and the "Peggy's" are the continuation of the old herd, and there is perhaps no other family in the Jersey breed that better combines breed, character, longevity, dairy character and continued high productivity than does the Belgonia Peggy family. The story of this noted family is best seen on the graph on page 428. The family originated in "Beauty of Belgonia" (9548 A.J.H.B.), a daughter of "Beauty 2nd of Bonshaw"—a double cross daughter of "Laddie 2nd of Banyule." Information concerning some of the herd sires is also given in the table on the next page.

"The Peggy Family."

"Peggy of Belgonia" (17799) was the first daughter of old "Beauty of Belgonia," her sire being "Prince of Belgonia"; a son of "Hedge of Banyule" and "Czarina of Springhurst." The latter cow has a record of 11,010 lb. milk and 583 lb. butter-fat, as well as being a winner of many butter-fat tests in the Goulburn Valley. Through both her sire and her dam "Peggy" came from high-producing ancestry. That she inherited this character is best shown by her average yield of 506 lb. butter-fat for four years; that she was a good cow of the breed may be gauged by her championship ranking at leading shows, while evidence that she was a "dual purpose" Jersey is afforded by her Type and Utility honours at Melbourne, Tatura and Kyabram.

"Peggy" had no female descendants, but two of her sons, "Belgonia Propeller" and "The Wattles Biplane," have been very prominent as herd sires. A short pedigree of the latter bull was shown in the 1936 Annual Report. "Propeller" sired some of the champion herd in 1933.

Peggy 3rd is also a daughter of old Beauty, her sire being "Bright Twylish of Belgonia," who represented the combined breeding of two famous Springhurst cows—"Wattle" and "Czarina." "Wattle" was tested for ten years, her last six

tests being made at Belgonia, where she averaged 528 lb. "Czarina's" best record was 583 lb. butter-fat. Peggy 3rd was sold to Mr. J. Pearson, of Warrawee Stud, where she milked well despite the handicap of a diseased jaw. Before leaving Belgonia she produced 547 lb. butter-fat, calving as a senior two-year-old. "Belgonia Peggy 8th," "Warrawee Peggy" and "Warrawee Peggy 2nd" are daughters of Peggy 3rd, so also is the well-known cow "Belgonia Peggy 6th" whose average yield of 552 lb. butter-fat for six years (twice over 600 lb.) and her show-ring honours mark her as being one of the really great cows of the breed. Peggy 6th was awarded the championship of the breed at the 1933 Melbourne Royal Show, where she also scored first as a five-year-old in milk. At the previous Royal Show she had been placed first in the Type and Utility Section, while on several occasions she had been champion dairy cow, and champion Jersey cow at leading shows in the Goulburn Valley.

"Peggy 9th," "Peggy 10th," "Peggy 11th," and "Peggy 13th" are all daughters of this great cow. The first two are full sisters by "Aveley Rex," a son of "Banyule Silvermine 21st" (seven years' average 383 lb. butter-fat). Neither daughter has attained the excellence of their dam. Each is, however, a consistent producer, with records of over 400 lb. butter-fat, while "Peggy 10th" was twice first in her class at Melbourne. "Peggy 11th" is a daughter of the imported bull "Duke of the Lake." As a junior two-year-old she produced 372 lb. butter-fat, and looks like making into a 500 lb. butter-fat cow. "Peggy 13th" is a daughter of "Design's Ruler" imported. She was placed first at the Royal Show and is at present under test.

"Peggy 4th" is yet another daughter of old "Beauty of Belgonia" and her junior two-year-old record of 409 lb. butter-fat suggested a mature cow of 600 lb. capacity. She was also a good "two-way" Jersey, for in addition to being a great producer, she scored first prize at the Melbourne Royal as a two-year-old, and was second in the Type and Utility Class. She was also successful in her class at several country shows.

"Peggy 7th" ex "Peggy 4th" is a daughter of "Aerial of Banyule," a bull that left many good daughters at Belgonia. "Peggy 7th" was purchased by Mr. J. J. Desmond of the "Macroom" Stud. Her top record to date is 448 lb. butter-fat. When mated to "Belgonia Battery," who was also by "Aerial," the issue was "Macroom Peggy," a high testing consistent producer, whose record of 490 lb. butter-fat as a junior four-year-old suggests an "over 500 lb. butter-fat" mature cow.

Mention should be made of "Stumpy of Belgonia," the fourth daughter of old "Beauty" (for she is a "Peggy" in all but name). She missed the 500 lb. butter-fat level by two pounds; but her eight year average of 395 lb. butter-fat showed her to be a consistent producer. She was second in her Class at the Royal Agricultural Society's Show, and champion at several Goulburn Valley shows.

There have been many famous herds and families of the Jersey breed, but few are more famous than the Belgonia Jerseys, and few if any families have greater claims to all round ability than the "Belgonia Peggys."

Mr. Maloney selected his original herd from known production ancestry. By skilful breeding methods and good farm practice he developed a herd second to none in Australia. His present herd was selected on different lines, for a higher level of breed quality has been sought, and is being obtained, without loss of the essential production character.

INFORMATIVE DATA ON SIRES USED OR BRED AT BELGONIA JERSEY STUD.

Sires.	Daughter—Dam Pairs Compared.	Number of Records Reviewed.	Average Yield of Mates.			Average Yield of Daughters.		
			Milk. (lb.)	Test.	Butter-fat. (lb.)	Milk. (lb.)	Test.	Butter-fat. (lb.)
"Hedge of Banyule"	15	67	7,721	5·22	402	7,247	5·74	416
"Aerial of Banyule"	12	85	9,967	5·27	525	9,010	5·52	497
"Averley Rex"	14	74	9,133	5·19	474	7,664	5·11	392
"Bright Twylish of Belgonia" ..	4	34	9,934	4·9	494	10,071	5·1	521
"Belgonia Cobham" (by "Aerial of Banyule," owned by P. Freestone); Association H. Test	17	115	9,089	4·67	424	9,895	4·55	450

The "Madeira" Family.

Thirty years ago Mr. Geo. Chirnside imported "Madeira 5th," who dropped a heifer calf shortly after her arrival in this State. This cow became known as "Madeira 6th" (impt. in *utero*). From her came "Fancy's Twylish Madeira" and "Werribee Northwood Madeira 2nd." From the latter cow, Capt. P. Chirnside bred "Brucevale Northwood Madeira 2nd," a very consistent producer who twice got very close to the 500 lb. butter-fat level. From this cow in turn Mr. R. M. Chirnside of the "Mornmoot" Stud bred three full sisters by "Werribee Prince Madeira," a bull who is a full brother to the dam of "Mornmoot Princess Madeira," the State Champion for the past two years.

"Werribee Princess Madeira" was sired by "Werribee Butter King," who also sired "Werribee Princess Satisfaction," the Reserve Champion herd test cow in 1935–36. She has an average yield of 664 lb. butter-fat for five years. "Werribee Stella Princess" is another high producing daughter as is shown by her 736 lb. senior four-year-old record.

"Werribee Prince Madeira" has some remarkably precocious junior daughters including "Mornmoot Fancy Madeira," a senior four-year-old (607 lb. butter-fat), "M. Fancy Madeira 2nd," a junior three-year-old (517 lb. butter-fat) and "M. Princess Madeira 6th" (who is from his full sister's daughter) 406 lb. as a junior two-year-old. "M. Northwood Madeira" a 606 lb. senior three-year-old, and her full sister "M. Northwood Madeira 2nd" (555 lb. as a senior four-year-old) are other daughters of this great sire.

At "Clarendon Eyre" in 1933–34, "Werribee Fancy Madeira" produced 698 lb. butter-fat and carried off the championship for the year. She is one of the "long distance" cows with a seven years' average yield of 571 lb. butter-fat.

Two "Mornmoot" cows by "Werribee Prince Madeira" have been bred from "Brucevale Fancy Madeira 2nd" who, together with her dam, exceeded the 500 lb. butter-fat level. This line runs back through two "Werribee" cows to "Fancy's Twylish Madeira".

From this daughter of "Madeira 6th" (impt. in *utero*) come "Werribee Fancy Madeira" the grand-dam of the remarkably consistent producer "Mornmoot Princess Madeira," whose records of 773 and 794 lb. butter-fat gained her the honour of State Champion test cow for two successive years.

Her half sister "M. Princess Madeira 2nd" produced 584 lb. butter-fat as a senior two-year-old and 570 lb. in the following year.

Although 30 years have elapsed since the original "Madeira" was imported, the name is still used as a family one. The high yielding cows of to-day, however, cannot be said to carry much of the foundation cow's inheritance. They are what they are because of a skilful plan of breeding and nutrition, and general good management.

List of Cows Yielding Over 600 lb. Butter-fat, 1936-37.

Name of Cow.	Butter-fat.	Breed.	Class.	Owner.
	lb.			
Mornmoot Princess Madeira	794·03	Jersey	Senior 4	R. M. Chirnside
Jerseyinn Edith 2nd	750·25	Jersey	Mature	E. J. Vagg
Werribee Princess Satisfaction	743·73	Jersey	Mature	R. M. Chirnside
Mornmoot Princess Madeira 3rd	720·92	Jersey	Senior 3	R. M. Chirnside
Hazelgrange Mistress	672·87	Jersey	Mature	F. W. Clarke
Victoria Chorus Girl	651·78	Friesian	Mature	Department of Agriculture
Ballara Starbright 6th	646·46	Jersey	Senior 4	R. M. Chirnside
Mornmoot Northwood Madeira	642·63	Jersey	Mature	R. M. Chirnside
Rintoul View Moleen	641·36	Jersey	Mature	N. H. Enders
Bonnie Doon Heather	625·43	Ayrshire	Mature	G. A. Fraser
Mornmoot Fancy Starbright	624·30	Jersey	Junior 3	R. M. Chirnside
Belgonia Eileen 2nd	620·29	Jersey	Junior 4	P. J. Maloney
Strathbow Goldie 5th	617·16	Jersey	Mature	F. Raggatt
Wandin Cream Piece	609·13	Jersey	Junior 4	T. Sebire
Mornmoot Fancy Madeira	607·26	Jersey	Senior 4	R. M. Chirnside
Mornmoot Northwood Madeira 4th	603·44	Jersey	Junior 3	R. M. Chirnside

Chart Showing the Breeding and Production of the Famous "Madeira" Family of Jerseys.

Madeira 6th (2857, impt. in dam) by "Lord of the Isles 2nd" ex "Madeira 5th" (impt.)

"Fancy's Twylish Madeira" (4720) by "Fancys Lord Twylish".

"Werribee Northwood Maderia" (6540) by "Northwood King" (impt.)

"Brucevale Northwood Madeira 3rd" (28547) by "Brucevale Masterpiece".
Jr. 2, 315 lb. butter-fat

"Mormoot Northwood Madeira 5th" (49059) by "Werribee Prince Madeira".
Jr. 2, 305 lb. butter-fat

"Mormoot Northwood Madeira 2nd" (37070) by "Werribee Prince Madeira".
Sr. 2, 421 lb. butter-fat
Sr. 3, 404 lb. butter-fat
Sr. 4, 555 lb. butter-fat

"Mormoot Northwood Madeira" (33142) by "Werribee Prince Madeira".
Jr. 2, 381 lb. butter-fat
Sr. 2, 471 lb. butter-fat
Sr. 3, 605 lb. butter-fat
Sr. 4, 589 lb. butter-fat
Mature, 643 lb. butter-fat

"Werribee Fancy Madeira" (17715) by "Masterpiece" (imp.)
Sr. 3, 486 lb. butter-fat
Sr. 4, 512 lb. butter-fat
Mature, 647 lb. butter-fat
Mature, 626 lb. butter-fat
Mature, 592 lb. butter-fat
Mature, 698 lb. butter-fat (Champion H.T. cow, 1933–4)
Mature, 438 lb. butter-fat

"Werribee Fancy Madeira 3rd" (25709) by "Werribee Starbright's King 2nd".
Jr. 2, 369 lb. butter-fat
Jr. 3, 424 lb. butter-fat
Jr. 4, 431 lb. butter-fat

"Clarendon Eyre Utopia" (29628) by "Eminent's Achievement of Clarendon Eyre".
Jr. 2, 444 lb. butter-fat
Jr. 3, 432 lb. butter-fat
Jr. 4, 363 lb. butter-fat
Mature, 423 lb. butter-fat

"Clarendon Eyre Utopia 4th" (43398) by "Rochette's Golden" (imp.)
Jr. 2, 299 lb. butter-fat

"Mormoot Northwood Madeira 4th" (45267) by "Werribee Jupiter".
Jr., 2, 474 lb. butter-fat
Jr. 3, 603 lb. butter-fat

Some members of Mr. R. M. Chirnside's "Madeira" family. Left to right,—"Princess Madeira 3rd," "Fancy Madeira 2nd," "Princess Madeira," "Fancy Starbright," "Fancy Madeira," "Princess Madeira 5th."

"Werribee Fancy Madeira" (6535) by "Island Butter King" (imp.)

"Werribee Attraction's Fancy Madeira" (13337) by "Werribee Attraction's Fancy"
Jr. 2, 329 lb. butter-fat
Jr. 3, 384 lb. butter-fat
Jr. 4, 481 lb. butter-fat
Mature, 394 lb. butter-fat
Mature, 443 lb. butter-fat

"Molly's Madeira of Brucevale" (21182) by "Masterpiece" (imp.)
Jr. 2, 354 lb. butter-fat
Jr. 3, 504 lb. butter-fat
Mature, 585 lb. butter-fat

"Mormoot Princess Madeira" (37071) by "Werribee Grandmaster"
Jr. 2, 424 lb. butter-fat
Sr. 2, 572 lb. butter-fat
Sr. 3, 773 lb. butter-fat (Champion Herd Test cow, 1935–6)
Sr. 4, 794 lb. butter-fat (Champion Herd Test cow, 1936–7)
Mature, 794 lb. butter-fat

"Brucevale Fancy Madeira 2nd" (25801) by "Brucevale Masterpiece".
Jr. 2, 358 lb. butter-fat
Sr. 3, 424 lb. butter-fat
Sr. 4, 514 lb. butter-fat
Mature, 451 lb. butter-fat

"Mormoot Fancy Madeira" (37059) by "Werribee Prince Madeira".
Jr. 2, 280 lb. butter-fat
Sr. 2, 434 lb. butter-fat
Sr. 3, 579 lb. butter-fat
Sr. 4, 607 lb. butter-fat

"Mormoot Princess Madeira 4th" (died as calf)

"Werribee Princess Madeira 2nd" (33143) by "Werribee Butter King"
Jr. 2, 265 lb. butter-fat

"Mormoot Princess Madeira" (45268) by "Mormoot Starbright King".
Jr. 2, 480 lb. butter-fat
Sr. 2, 584 lb. butter-fat
Sr. 3, 570 lb. butter-fat

"Mormoot Princess Madeira 3rd" (45269) by "Staghorn Larkspur's Majestic".
Jr. 2, 551 lb. butter-fat
Sr. 3, 721 lb. butter-fat

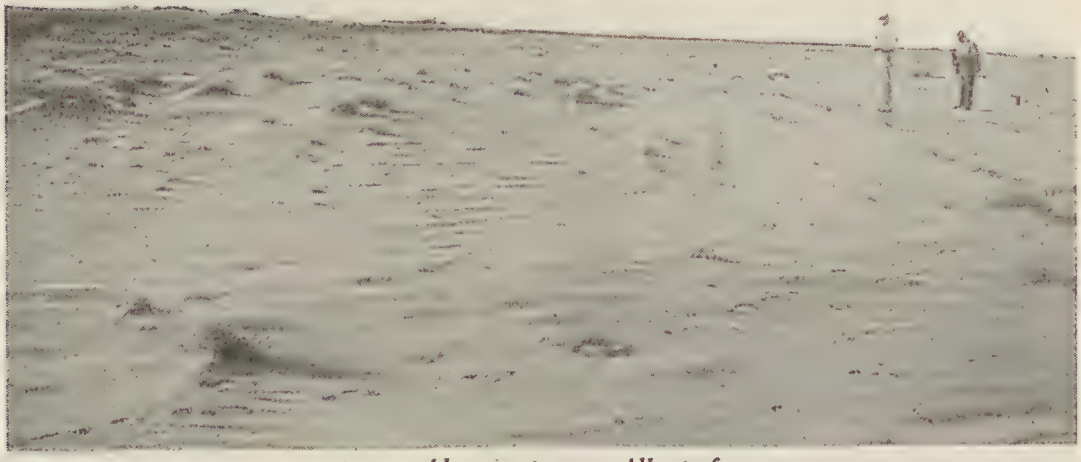
"Mormoot Fancy Madeira 2nd" (45255) by "Werribee Prince Madeira".
Jr. 2, 395 lb. butter-fat
Jr. 3, 517 lb. butter-fat

"Mormoot Princess Madeira 5th" (49660) by "Werribee Jupiter".
Jr. 2, 429 lb. butter-fat
Sr. 2, 571 lb. butter-fat

"Mormoot Princess Madeira 6th" (54250) by "Werribee Prince Madeira".
Jr. 2, 406 lb. butter-fat

Herd Averages, 1936-37

Owner.	Breed.	Junior 2-year-old.		Senior 2-year-old.		Junior 3-year-old.		Senior 3-year-old.		Junior 4-year-old.		Senior 4-year-old.		Mature.		Total Herd.	Average without Allowances. butter-fat.	Average with Allowances. butter-fat.
		No.	Average. butter-fat.	No.	Average. butter-fat.	No.	Average. butter-fat.	No.	Average. butter-fat.	No.	Average. butter-fat.	No.	Average. butter-fat.	No.	Average. butter-fat.	No.	lb.	lb.
			lb.		lb.		lb.		lb.		lb.		lb.		lb.			
Herds of between 15 and 24 Cows.																		
1. Chirnside, R. M.	Jersey ..	1	305·30	2	577·52	4	565·74	2	641·91	..	..	5	635·49	3	661·56	17	598·19	649·78
2. Maloney, P. J. ..	,, ..	5	368·90	..	..	3	482·88	1	496·67	2	518·88	2	511·70	5	524·90	18	470·86	529·02
3. Wood, J. V. M.	,, ..	4	339·78	3	415·62	6	411·77	..	..	..	..	1	423·17	4	487·66	18	413·91	486·52
4. Handbury, J. E. and Sons, No. 1 Farm	,, ..	4	313·76	4	379·49	1	384·00	3	437·98	..	..	1	446·70	5	471·55	18	404·19	470·13
5. Hore, E. ..	,, ..	4	330·42	3	390·30	2	323·97	1	419·37	2	522·00	1	473·76	2	429·55	15	395·78	469·11
6. Department of Agriculture	Friesian..	1	370·71	1	318·51	4	333·39	1	304·65	1	366·20	2	458·65	5	481·33	15	401·17	446·50
7. Vagg, E. J. ..	Jersey ..	4	286·06	3	366·18	1	335·39	..	..	..	..	..	..	8	460·74	16	391·51	445·76
8. Ballarat Orphanage	,, ..	2	337·92	5	339·47	2	387·65	4	390·99	..	..	1	424·96	5	417·79	19	380·33	443·39
9. Broad, A. A. ..	,, ..	4	311·90	1	365·69	1	417·60	..	..	1	386·01	4	386·30	5	422·46	16	379·65	428·90
10. Bidgood Bros. ..	,, ..	6	266·94	2	300·60	3	365·76	1	368·16	4	425·74	..	..	2	455·53	18	349·01	427·18
11. Desmond, J. J.	,, ..	6	275·66	..	..	3	357·31	2	329·58	2	399·76	..	..	7	433·31	20	360·89	421·39
12. Chadderton, J. E.	,, ..	4	307·25	1	370·31	1	381·06	..	..	2	341·18	2	363·03	5	419·18	15	365·65	417·65
13. Nancarrow Bros.	,, ..	9	283·07	1	308·91	..	..	..	..	1	339·39	..	..	7	434·56	18	346·55	415·82
14. Lyon, W. H. ..	,, ..	4	283·64	2	352·16	4	346·86	2	348·17	3	368·60	..	..	3	368·09	18	340·71	411·10
15. Fraser, G. A. ..	Ayrshire	4	330·31	4	271·57	1	377·54	1	355·85	1	383·25	..	..	4	394·78	15	333·55	404·22
16. Harvey, T. ..	Jersey ..	6	289·98	..	..	2	264·19	2	349·48	5	327·18	1	345·73	6	373·53	22	326·82	385·77
17. Coughlin, C. ..	,, ..	5	289·44	..	..	2	291·75	5	376·26	3	335·14	..	..	5	290·40	20	318·47	379·97
18. Tomasetti, B. G.	Ayrshire	4	221·52	3	259·95	..	..	1	315·43	1	311·02	..	..	7	407·90	16	321·73	377·23
19. Colenso, L. W. R.	Jersey ..	1	230·03	..	..	2	346·75	5	330·98	2	410·16	1	350·82	7	327·75	18	335·77	375·04
20. Box, late Dr. J., Whittlesea	,, ..	6	232·18	2	232·57	2	280·24	2	312·58	2	367·28	1	362·45	4	396·96	19	301·51	371·93
21. Richardson, W. S.	,, ..	4	235·73	1	305·32	1	315·45	1	272·42	1	313·99	4	382·51	6	356·33	18	323·23	371·39
22. Pattison, F. ..	Ayrshire	..	..	1	315·94	..	..	4	310·96	2	330·90	3	346·68	5	339·12	15	330·48	362·48
23. Walker, C. S. ..	Jersey ..	1	295·45	2	266·70	4	278·07	1	301·79	2	337·75	..	..	5	335·01	15	306·23	358·23
24. Thomas & Taylor.	Ayrshire	..	..	4	220·67	1	281·96	5	320·16	..	..	..	..	10	342·41	20	309·48	350·98
Herds of over 25 Cows.																		
1. Read, J. D. ..	Jersey ..	9	335·80	4	405·59	2	465·58	5	465·46	3	465·52	1	447·51	7	466·04	31	419·66	494·75
2. Payne, A. E. T.	Guernsey	6	325·55	2	352·67	2	410·98	3	425·63	6	371·46	..	..	6	420·79	25	380·44	445·44
3. Lyon, C. G. ..	Jersey ..	17	301·03	4	387·13	6	397·01	1	316·14	2	320·11	3	417·80	12	397·80	45	356·25	440·59
4. Atkinson, W. K.	Dairy Shorthorn	8	259·83	5	300·97	5	392·53	4	362·24	5	413·56	1	405·34	16	431·67	44	372·16	439·38
5. Huffer, J. A. ..	Jersey ..	4	282·47	2	342·09	4	377·22	2	400·88	2	405·92	2	404·02	13	396·74	29	375·93	425·69
6. McNabb, G. A. and Son	,, ..	14	281·06	6	335·49	1	282·49	3	313·35	3	437·27	3	364·87	4	459·07	34	335·67	425·17
7. Estate of late A. M. Nicholas	,, ..	6	327·26	4	276·30	1	405·89	1	277·82	2	394·38	2	441·89	11	393·56	27	361·25	418·38
8. Smith Bros. ..	,, ..	3	272·65	..	..	5	329·52	1	330·06	2	388·05	..	..	17	380·09	28	358·33	396·97
9. Department of Agriculture	Red Poll	18	247·10	2	210·46	6	301·83	5	272·72	8	315·14	5	320·17	16	320·49	60	288·22	370·05
10. McDougall, J. E.	Jersey ..	8	269·46	2	282·41	6	301·23	1	354·78	1	328·91	4	316·75	3	272·48	25	291·84	369·64
11. Foster Bros. ..	,, ..	10	212·21	1	351·76	2	235·91	5	285·13	..	..	1	328·58	8	363·89	27	281·89	353·82
Herds of between 10 and 14 Cows.																		
1. Enders, N. H.	Jersey ..	6	337·29	2	389·44	..	..	1	524·76	2	543·00	..	..	2	558·99	13	425·49	507·03
2. Noble, T. M. and Sons	,, ..	1	327·72	2	439·81	..	..	1	426·28	3	445·75	..	..	4	488·63	11	447·76	493·22
3. Norman, J. G.	,, ..	1	297·71	1	446·65	1	435·11	4	370·71	..	..	..	..	5	513·58	12	435·85	480·85
4. Hurrey, W. H.	,, ..	5	329·46	..	..	1	271·61	2	492·25	..	..	1	470·93	3	423·92	12	387·17	455·51
5. Meaklim Bros. ..	Dairy Shorthorn	2	316·75	..	..	2	438·44	2	353·63	1	318·01	..	..	3	427·23	10	381·73	437·73
6. Gay, R. G. and Son	Jersey ..	1	313·06	2	321·95	2	338·50	..	..	1	413·71	2	463·05	5	418·07	13	389·55	432·62
7 Dookie Agricultural College	Ayrshire	2	265·32	..	..	..	..	4	413·36	1	456·69	..	..	5	395·54	12	384·87	428·21
8. Hercus, T. B. ..	Jersey ..	5	296·86	1	242·28	..	..	1	411·57	2	405·22	1	436·05	..	..	10	338·46	424·46
9. Goldschmidt, O.	,, ..	9	282·71	..	..	2	344·49	..	..	..	..	..	..	1	352·01	12	298·78	402·12
10. King, H. W. ..	,, ..	..	..	1	287·68	1	396·33	..	..	..	..	3	344·79	6	398·29	11	373·46	395·28
11. Fairchild and Clutterbuck	,, ..	1	253·41	2	305·72	3	343·33	..	..	2	351·52	..	..	2	342·28	10	328·24	392·24
12. Alston, N. B. ..	,, ..	6	264·85	..	..	4	285·55	..	..	2	350·33	..	..	..	..	12	286·00	379·33
13. Coulthard, J. L. and Son	,, ..	2	303·78	2	279·93	2	305·11	1	346·50	1	333·57	2	341·88	3	322·13	13	315·99	372·91
14. Raleigh, Miss H. E.	,, ..	3	297·86	1	318·10	..	..	1	298·43	1	277·15	..	..	5	303·75	11	300·55	351·45



100 acres blown out on an Alberta farm.

Soil Erosion

The Problem in America

By H. C. Forster, M.Agr.Sc., Ph.D., Inspector of Agriculture.

Dr. Forster, who is an officer of this Department, has for the past two years been studying American agricultural conditions at the University of Iowa, U.S.A., and has come in contact with soil erosion problems in the central and eastern states.

NATURE represents an ever-changing balance between the conflicting forces of construction and destruction. Soil is formed from rocks in a very definite manner. The bare rock surface is first covered with small lichens which hold together the tiny fragments of mineral and rock which result from the action of weathering forces on the hard surface. This mineral base, together with the decomposing remains of dead lichens, forms the first thin layer of soil. With the passing of time the soil layer becomes thicker and can support a more active, highly developed type of plant. Thus the lichens give place to mosses, the mosses to small grasses, then shrubs, trees and finally, if conditions are favorable, to the tall forests. It has been estimated that, under average conditions, it takes about 1,000 years to form one-inch of soil in this manner. If, at any stage, the vegetative covering be destroyed, the constructive forces in soil formation are nullified, leaving the destructive agents of wind and water to remove the loose particles of earth and destroy the work of centuries. There is thus this fine balance between plant and soil, neither being able to exist without the other.

This balance, however, is upset by man. His demand for timber razes the forests, his need for food necessitates tilling of the soil and breaking of the grasslands. Much of the destruction is heedless and leads inevitably to erosion. History tells us that north-western China was once a prosperous land with fertile soil, but the bare jagged yellow slopes bordering the Hwang river, notorious these days for its disastrous floods, to-day, bear no sign of that era. The decadence of the ancient empires of Babylon and Persia is said to be due in no small measure to the dire effects of wasteful management of their once fertile soils.

Unhappily man often fails to profit by past experience. The more recent conquest of America tells much the same tale. From the Rocky Mountains eastward, the United States may be divided into three main belts running north and south—the forest area on the Atlantic

where rainfall is the highest, the prairie or long grass plains next, and the short grass plains lying furthest west and receiving the lightest rainfall.

Invasion by whites originated on the east coast, and for the first hundred years was confined mainly to the forest region. Striving to increase the size of their clearing and, at the same time, to deprive warlike Indians of cover, the settlers by fire and axe destroyed large areas of forest. Later the wave of settlement penetrated to the interior where settlers found life much easier amongst the fertile plains. With the ever increasing demand for food, the land was soon put to the plough and cropping became general. Two factors tended to make this soil particularly susceptible to erosion. As in China, much of the soil is loessial (wind-blown) or glacial in origin, and as such is of a fine silty texture, eroding very easily. Moreover, when it begins to wash, the banks erode vertically, tending to form steep gullies rather than broad open valleys. Again, the warm humid summers and rich soil favored the growth of maize to a remarkable degree, and the inter-row tilling necessary for this crop leaves the soil without any vegetation to protect it from summer thunderstorms.

After 1870 (the Civil War) the invasion of the third belt commenced with the development of trans-continental railways. Cattle ranches started a new era on the prairies. All went well until the advent of the World War when grain prices began to soar. By 1920 mechanization of wheat-growing in true American fashion was at its height, counties boasting of the thousands of acres brought under the plough. The depression of 1929 brought its rude awakening and thousands of bushels of wheat were left abandoned in the fields. A succession of drought years beginning in 1930 brought about the abandonment of many homesteads. Because of the inroad of wheat-farming, grazing lands became much over-stocked, and with the dry years over-grazing was general, and many areas were eaten out. So arose the conditions which favored the start of the famous "Dust Bowls" of Oklahoma, Texas, and Kansas, where dust storms arise many times each year and colour the sky for many hundreds of miles to the east.

The Extent of the Damage.

A survey of the damage is said to reveal fifty million acres of once fertile land already ruined with another fifty million acres almost as seriously affected. At the end of only a century of cultivation, 30 per cent. of all land in farms is either destroyed, seriously damaged, or threatened. From north to south, from prairie to forest, evidence of erosion is everywhere. In the Canadian prairies near Regina recent observations on one field showed that in one season an average of 1¼ inches of top soil was removed by wind. Soil depths in Iowa show that in a school-yard which had never been cultivated, the surface soil was 21 inches deep. Across the fence in a cultivated field erosion had reduced the depth to only six inches. In Georgia, 50 years ago, the drip from the eaves of a barn started a small wash. To-day that wash, known as Providence Cave, is a chasm more than 100 feet deep and engulfs houses, barns, roadway, and the neighbouring school-house. No small amount of the damage and suffering caused by the recent floods in the eastern portion of the Continent may be laid at the door of wanton forest destruction favoring the rapid run of winter snows.

The American Red Cross alone have spent over 20 million dollars during the last two years in relief of flood suffering. Millions of tons of once fertile soil have been washed into the rivers. It has been estimated that the famous Boulder Dam which has just been completed at enormous cost will be filled in a century by silt from the muddy Colorado, that river which a rancher once said was "too thick to drink and too thin to plough." And so the tale might be continued indefinitely.

Wind Erosion—the plant cover has been removed from the soil leaving it a prey to wind erosion.

Can Erosion be Stopped ?

If the present civilization is not to follow in the footsteps of past eras, it will only be by virtue of its ability to recognize the immutable laws of nature, and adjust its behaviour to conform to them. Because of its very dependence on the soil for the production of food, the human race cannot afford to sacrifice the future for the sake of present gain.

Restoration of past damage is beyond the scope of man. His hope must lie in preventing further loss, and, by attempting to simulate natural conditions, to allow those same forces of nature to commence the upward trend once again.

Gullies formed by water erosion.

Many European countries have recognized the danger and have been spending large sums in such work. In the United States the work before 1928 was of a sporadic nature. In that year an attempt was made to co-ordinate the forces, and organization of the Federal Soil Erosion Experiment Stations was initiated. With a portion of the money available from P.W.A. funds for relief purposes, a start was made in 1933 with Emergency Conservation Work in which special camps of unemployed (C.C.C. camps) were organized to carry out erosion control. In 1935, a permanent bureau under the Department of Agriculture was formed to be known as the Soil Erosion Service. Grants totalling 13 million dollars have been assigned and plans made for 40 projects in different portions of the country covering over forty million acres.

Water Erosion and Its Control.

As a result of the work both in America and on the Continent, the control of water erosion is fairly well established. The means by which it is carried out vary somewhat in different conditions. Under the more rigid control which holds in such countries as Italy, farmers are compelled by law to carry out certain practices. In the United States, agriculturalists are encouraged by propaganda and subsidies to conform to good principles.

A visit to one of the Soil Conservation stations affords ample evidence of the effectiveness of the methods. In forest areas, reafforestation including cleaning after timber companies' operations and replanting are carried out. The practice of cutting only mature trees is enforced and the utmost precautions against fire are adopted.

Sheet Erosion.

On the rich prairie soils erosion takes two forms, sheet and gully erosion. The former, which is very prevalent on the fine silty soils used for maize growing, is very subtle in nature and a farmer may not be aware of its presence until the greater portion of his surface soil is gone. With every shower, small rivulets are formed, each washing a small portion of soil to lower levels. Following cultivations smooth the soil, and it is only when patches of sub-soil begin to appear on the surface that the first signs of the trouble are observed. By that time the damage is done.

Control lies in the decrease of acreage devoted to maize and the sowing down of pastures or legumes. Since this involves a financial loss, the practice is not popular with commercial non-resident interests. Hence there has arisen the Soil Conservation Programme, which replaced the old A.A.A. programme of 1935. Briefly under this new scheme, farmers are paid a subsidy of about $10 per acre for every acre changed over from a " soil depleting " crop, such as maize, wheat, oats, &c., when harvested for grain, to a " soil conserving " crop such as any legume, pasture of any type or small grain when fed off or ploughed under. In addition further payments of $1 to $2 per acre are made for a change to special " soil building " crops such as lucerne, red or white clover, or for certain practices, such as liming. Apart from this crop rotation, methods of contour farming, in which cultivation and planting are performed along the contours of the ground rather than parallel to the fence lines, are proving very successful. Listing (cultivating with special duck feet) which leaves the soil in deep ridges assists greatly in preventing rapid run-off of water. Strip cropping

in which comparatively narrow strips of maize are separated by strips of wheat or oats, or legume is also proving very effective.

Gully Erosion.

The second type of erosion, gullying, is more obvious and can be attacked sooner. The planting of grass strips in the bottoms of valleys where erosion is commencing, holds the soil in place. Where gullies are already formed, brush and stone stops, placement of small dams, &c., help to hold up the water and allow the silt to drop and thus prevent its loss. If this is followed by the planting of shrubs and quick growing trees, damage is prevented from spreading.

Wind Erosion.

So far as the United States is concerned, the problem of wind erosion has been mainly with the areas in the short grass plains. Because of the recurrent droughts, much of the area is "sub-marginal" as far as cultivation is concerned, and it has been the policy of the Government to get this area back under pasture as soon as possible. Stations in the States of Montana, Wyoming, Kansas, and Oklahoma have been doing good work in this connexion. Their efforts have been directed mainly toward determining the most suitable grasses, and the best methods of reseeding. Perhaps the most promising of the grasses are crested wheat grass (*Agropyrum cristatum*), Gramma grass (*Bouteloua gracilis*), several of the brome grasses (*Bromus inermis* and *tectorum*), and native buffalo grass (*Buchloe dactyloides*), all of which are very drought resistant.

Cultivation Areas in Canada.

Because their conditions are rather severe for economic sheep or cattle production, settlers in the Great Canadian prairies have perforce been faced with the control of wind erosion despite continued cultivation and cropping of their land. Because of the general similarity of cultural methods to much of the wheat land of the lighter soils of Australia, some account of the conditions prevailing there may be of interest.

Southern Alberta and Saskatchewan have suffered very badly in the past from duststorms. The soil is of a light silty texture, grey in colour, and self mulching in nature. Rainfall is light, averaging about 11–16 inches per annum, thereby necessitating a long period of fallow to conserve moisture. The general rotation is one of wheat, wheat, fallow, although oats tend to replace the second wheat crop to give better control of disease. One important difference is that live stock are not so prevalent and hence cultivation of the fallows rather than grazing methods must be used to control weeds.

Strip Cropping.

Towards the end of the war period, wind erosion became so bad that despite the high prices for wheat, farmers were becoming desperate. One such family, the Withages by name, living in the Monarch district of Alberta, became so concerned that Withage Senior made a trip south to the State of Washington in order to prospect a new farm, leaving the sons to liquidate the old property as best they could before joining him. The sons, however, decided to have one last attempt. Noticing that there was less erosion on the west side of their fallows where they bordered on a neighboring crop, they decided to increase the area of west margins, which could only be accomplished by splitting their fields into narrow strips and alternating fallow and crop. So originated the "strip farming" of the Canadian provinces, and so successful was the manoeuvre that when Withage Senior returned from his trip, the family decided to stay with the old farm, and to-day is one of the most prosperous in the community. As adopted at present, the strips are from one to four chains in width running north and south, so that the prevailing winds run across the shortest distance. The width on any one field is determined by topography and the texture of the soil.

The Ploughless Fallow.

"Strip cropping" alone however has not completely controlled erosion, for serious damage occurs early in spring when the snow melts and before growth of vegetation commences. The Dominion Experiment Stations in the prairies are hard at work determining additional methods of control.

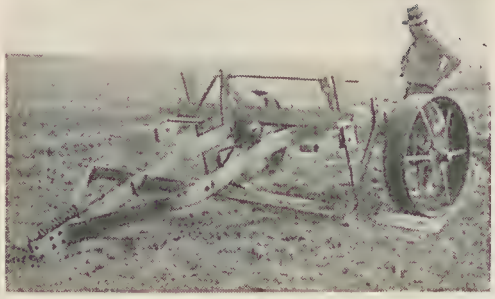
"Listing" arrests erosion for the time but the furrows soon become filled. Once again it was Nature that showed the way. Erosion seldom occurs on fields left in stubble. Could not some way be devised whereby the soil could be held in position by the stubble during the fallow period?

Normally this would be regarded as the very antithesis of good farming, but something had to be done. After much thought it was reasoned that the good effects of moisture preservation and eradication of weeds could be combined with the retention of the stubble only by abandoning the plough and using some type of under-surface cultivation. If, instead of ploughing, which would normally turn under the vital stubble cover, an

implement with a knife bar in place of tynes could be used so that it ran along about 3 inches below the surface, the aim would be achieved.

The problem interested many, and the final result of many trials throughout the country has been the evolution of two new implements, the knife-bar and the rod-weeder. In these, heavy curved metal supports drop from the frame and support either a straight blade about 3 inches in width or a rod of about 1 inch in diameter. Sometimes twisted wire is used also. In the rod-weeder, a chain drive rotates the rod and the machine has the additional advantage over the knife-bar that it gathers the weeds by their roots and frees them from their hold on the soil. This implement however cannot work in soil that is at all heavy, and it is adapted more for use at the second or third working. If the soil has set badly, the first working frequently is performed with a narrow tyned scarifier. And so has developed the "ploughless fallow," which to-day may be seen only on the better farms, but which undoubtedly will become much more general as farmers realize its effectiveness. Results from experimental plots show that there is no decrease in yield with this method, and in those cases where blowing is at all bad, the yield has been materially increased.

The general substitution for ploughing of some form of scarifying is one which keen minds throughout the drier areas of the United States



The knife-bar cultivator.

of America and Canada are seriously considering, and the favorable results of a similar practice in some of the lighter soils of Australia lend support to its more general acceptance.

Undoubtedly there will be some disadvantages accompanying the general methods of "strip cropping" and "ploughless fallowing." Loss of organic matter presents no difficulty to the Canadians. Their soils are rather too high in humus for the rainfall at the present time. Entomologists and pathologists however are very concerned. "Strip cropping" provides host material every few chains for harmful pests, and damage from such insects as "wheat saw-fly" is already on the increase. The permanent retention of the straw stubble and the absence of burning-off must unquestionably increase such

A "ploughless fallow." The soil has been cultivated by knife-bar and efforts will be made to retain the stubble surface cover throughout the fallowing period.

A rod-weeder in operation.

diseases as root-rots and flag-smut. If new methods of control cannot be found, the breeding of resistant varieties appears to offer the best solution.

Possible Application to Australia.

One hardly needs to raise the question, "Is Australia suffering from erosion"? Many excellent articles have been written on the damage of water erosion following deforestation. Any one who has lived in the Mallee or within a hundred miles of it appreciates the nature of Oklahoma's duststorms. An excellent survey by Wm. Davies, of pasture conditions in Queensland and New South Wales following the overgrazing during the drought years, indicated the damage to these areas, while the survey of Central Australia recently completed by F. N. Ratcliffe indicated in no uncertain manner the damage and the underlying cause of the increase in erosion in the interior where rabbits and overstocking are doing so much damage to the native vegetation.

With regard to this phase it does not appear that Australia will suffer quite as badly as the United States of America. The fact that our soils are older and have a higher percentage of clay will retard erosion rates. Furthermore, the absence of winter-killing and the active growth of our vegetation throughout most of the year combined with the fact that there is no accumulation of winter snows must decrease the liability to serious erosion. Though the process may be slower, Nature, nevertheless, is just as relentless whatever the conditions, and if wanton destruction of forests is allowed to proceed, erosion will inevitably follow.

There can be no question that wind erosion is a serious problem in Australia. The more pressing problems which confront us occur on the lighter soils of the cultivated areas in the Mallee districts and there is every need to get those portions which are sub-marginal as far as cropping is concerned, back into vegetation. If some new type of edible grass can replace the native vegetation so much the better for the pastoralist.

As for the preparation of fallows in the lighter soils of our cultivation areas in Australia, the ideas behind the methods developed in Canada should have some application. Modification undoubtedly will be necessary. The preservation of the stubble cover appears to provide possibilities. Where stumps are not present, the knife-bar may be useful in the lighter soils. In the heavier soils, the question of replacing the plough by the scarifier and the retention of the stubble as much as possible should be worth consideration.

With the more mixed type of grazing and cultivation usual on Australian farms, together with the prevalence of the very desirable practice

of grazing the fallows instead of cultivation, it is difficult to see how "strip cropping" can ever assume general importance under our conditions.

In conclusion, let me say that the general resemblance of our Wimmera soils to some of the soils of the Canadian prairies causes one to wonder if erosion will ever assume importance there. Undoubtedly the higher clay content of the Wimmera soils has an important bearing on the matter. Time alone will tell if the present rotation methods of wheat, fallow, wheat will produce the same effect on our soils as it has done on the Canadian. If that time ever does come, the "ploughless fallow" should be of very real importance.

Butter Production and Export

The following table shows :—

(*a*) Factory production of butter and cheese in Victoria for the period July, 1936, to June, 1937, compared with the corresponding period of 1935–36 ; and

(*b*) Quantities and percentages of various grades of bulk butter examined for export in Victoria from 1st July, 1937, to 24th July, 1937, in comparison with the corresponding period of 1936.

FACTORY PRODUCTION OF BUTTER AND CHEESE IN VICTORIA (QUANTITIES IN TONS).

Month.	Butter.		Cheese.	
	1936–37.	1935–36.	1936–37.	1935–36.
July to February	53,070	52,767	4,516	3,922
March	5,067*	3,589	423	263
April	3,712*	2,853	350*	226
May	2,808*	2,406	297*	204
June	2,197†	2,148	240	208
Totals, 12 months	66,854†	63,763	5,826	4,823

* Revised. † Subject to revision.

BULK BUTTER EXAMINED FOR EXPORT IN VICTORIA (QUANTITIES IN TONS).

Period.	1937–38. How Graded—				Total.	Period—	1936–37. How Graded—				Total.
	Ch.	1st.	2nd.	Pty.			Ch.	1st.	2nd.	Pty.	
1st to 24th July ..	..	7	9	2	18	1st to 25th July	30	9	15	2	56
Percentages ..	..	39	50	11	..	Percentages ..	53·6	16·1	26·8	3·5	..

Due to low production during July, choicest butter was required for local consumption.

Codling Moth and Black Spot Control

Apple and Pear Demonstration Plots, 1936-37

Spray schedules for apples and pears, codling moth lures, codling moth activity, details of apple plots (northern and southern districts) and recommendations for black spot control were discussed in the August issue of this Journal.

PEARS.

East Burwood.

This plot, of ten rows of Packham's Triumph (240 trees), and two rows of Winter Nelis (48 trees), was conducted on the orchard of Mr. V. L. Fankhauser, East Burwood.

For black spot control, Bordeaux mixture sprays were applied, while for codling moth control, straight lead arsenate sprays were used. The lure graph 6 shows that a small peak was recorded in mid-November, and that the main spring brood emerged on 28th to 30th November. Following reduced moth activity during the summer months, a smaller second brood emerged from mid-February to mid-March, but this was too late to affect the Packham's, which were harvested on 18th to 20th February. Five lead arsenate sprays were applied to the Packham's Triumph trees, and six to Winter Nelis.

Packham's Triumph pear trees.—Tyabb.

Codling moth infection on Packham's Triumph is set out in Table V., which shows that control of codling moth was very satisfactory. No records were kept for Winter Nelis. The fact that 36 per cent. of the entries took place through the calyx emphasizes the necessity for applying a lead arsenate spray before the calyx closes.

Black spot infection was successfully prevented on both varieties by the Bordeaux mixture spray programme.

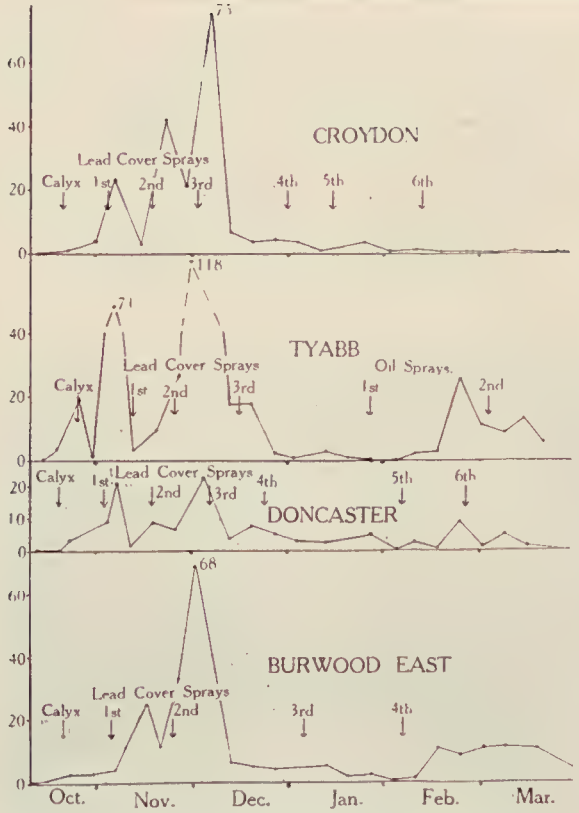
Croydon.

The plot at Croydon was situated on the orchard of Mr. W. Lipscombe, and consisted of a very even block of Beurre Bosc trees, 160 in number. The spray schedules as shown above, were used for black spot and codling moth control.

The lure graph 6 shows that one brood only of moths—the spring brood—was recorded in the pears. This is in contrast to the apple demonstration plot on the same orchard, where a small second brood was recorded. The large spring brood emerged during 1st to 3rd December, following two smaller peaks on 6th and 20th November.

Seven lead arsenate sprays—one calyx and six covers—were applied for codling moth control, and the timing of these sprays is indicated on the lure graph. With more careful timing of application, equally good or better results could probably have been achieved with five to six sprays. By delaying the application of each of the first three cover sprays a few days, the fourth and fifth cover sprays could have been omitted. The crop was a heavy one, and the control of codling moth (0·17 per cent. infection) was very satisfactory.

For black spot control an additional Bordeaux mixture spray 2 : 2 : 100 was included in the lead arsenate spray applied on 20th November. This was considered necessary to check the spread of leaf spot which appeared about this time, following showery weather. Black spot infection of the fruit at harvest time was negligible so that the control may be regarded as very satisfactory.



Graph 6.—Showing the number of moths caught in 10 lure pots (weekly totals) at Croydon, Tyabb, Doncaster, and Burwood East.

Doncaster.

Demonstration work was carried out on the orchard of Mr. E. Thiele. The plot consisted of three varieties—Josephine (144 trees), Winter Nelis (72 trees), and Beurre Bosc (72 trees)—and spraying was confined to codling moth control. Straight lead arsenate sprays were used.

A systematic campaign of orchard sanitation during the preceding winter, was reflected in the low moth population, as indicted by lure catches (Table VI.), in the 1936–37 season.

Moth activity is indicated by the lure graph 6, which shows that the spring brood emergence was divided into two equal sections. One section emerged on 5th and 6th November, and the other on 1st and 2nd December. Moths were not very prevalent during mid-summer months, but on 25th February, a small second brood was recorded.

As at Croydon, seven lead arsenate sprays were applied, except on Beurre Bosc, where six sprays were used, but with improved timing, equally good or better results should have been possible with a reduced number of sprays. For example, by delaying the first cover spray a few days, the second cover spray could have been omitted.

The results achieved in codling moth control are set out in Table V., and are highly satisfactory. No complete record is available for Winter Nelis infection, but it was as satisfactory as that in Beurre Bosc.

Tyabb.

Located on the orchard of Mr. F. C. Renouf, the Tyabb plot consisted of three rows of Packham's Triumph (120 trees), and two small rows of Beurre Bosc, comprising 26 trees.

For black spot control, the programme of Bordeaux mixture sprays was used, while for codling moth control, four lead arsenate sprays (one calyx spray and three cover sprays) followed by two white oil sprays were applied. White oil was used on this plot as no facilities were available for washing the fruit.

A fairly large peak of moths on 6th November (see lure graph 6), was followed by the main spring brood in the period 28th to 30th November.

TABLE V.—PEAR PLOTS—SOUTHERN DISTRICTS. CODLING MOTH INFECTION.

District.	Variety.	Number of Trees.	Average Yield of Fruits per Tree.	Codling Moth Infection Percentage of Total Yield.*
				%
Burwood East	Packham's	240	315	0·14
Croydon	Beurre Bosc	160	665	0·17
Doncaster	Josephine	144	760	0·10
	Beurre Bosc	72	575	0·15
Tyabb	Packham's	120	335	0·70
	Beurre Bosc	26	300	0·35

* Yield and infection include windfalls.

Moth activity during late December, January, and early February, was negligible, but on 25th February a small second brood of moths emerged. The timing of sprays is indicated on the lure graph 6. Despite the high moth population on this plot (Table VI.), the infection was very light (0·7 per cent. on Packham's Triumph and 0·35 per cent. on Beurre Bosc), and the results achieved with the spray programme are excellent.

No black spot infection occurred on this plot, and the spray programme was, therefore, considered very satisfactory.

TABLE VI.—LURE-POT RECORDS—PEARS.

District.	Number of Lures.	Total Number of Moths Caught.	Number of Moths per Lure-Pot.
SOUTHERN DISTRICTS			
Burwood East ..	30	706	23·5
Croydon	17	372	22·0
Doncaster ..	28	369	13·0
Tyabb	15	525	35·0
NORTHERN DISTRICTS			
Harcourt—			
No. 1 ..	6	181	30·1
No. 2 ..	12	223	18·6
Bamawm	24	274	11·4
Kyabram	20	62	3·1
Ardmona	20	200	10·0
Shepparton ..	20	88	4·4

Ardmona.

Comprising 106 trees only, the plot on Mr. V. R McNab's orchard was one of the smaller plots established for the demonstration of black spot and codling moth control.

Excellent control of codling moth was obtained with four lead arsenate sprays only, and the dates of application are indicated on the lure graph 7. The graph of moth catches was not typical of the Northern Districts, as there was a large catch of moths in late November and early December, due probably to the proximity of the plot to the packing shed.

The spraying equipment on this plot was particularly efficient, and the application of the sprays thorough. The timing of the sprays could have been improved by delaying the first cover spray a week, and this may have provided even more effective protection following the moth activity in early November. Infection due to codling moth amounted to 1·8 per cent., and that due to black spot 0·01 per cent, (one pear in 10,000).

Bamawm.

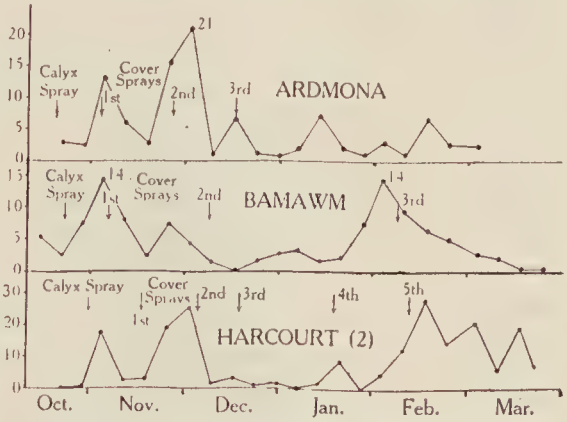
For the purpose of demonstrating the control of black spot and codling moth, five varieties of pears occupying over 2 acres, were available at Mr. J. McI. Sinclair's orchard, Bamawm Extension. The five varieties were William's, Beurre Bosc Winter Nelis, Josephine, and Packham's Triumph.

The results for codling moth control as set out in Table VII. were satisfactory. Four lead arsenate sprays (including one calyx spray) were applied except to W.B.C., which required only three sprays. The cost of materials varied from 3½d. per tree in the case of W.B.C., to 7¼d. per tree in the case of the large Josephine trees which received four sprays.

The emergence of the spring brood moths began in October and reached a peak during the first week of November. Thereafter, moth catches diminished until in December they were very low. Early in January a minor peak developed, but the peak of the second brood emergence was not reached until early February.

The calyx spray was not applied until 22nd October, two to three weeks after petal-fall. It was not necessary to apply this spray immediately after petal-fall because moths were not sufficiently active, and, further, the open nature of the calyx of pears enabled the spray to be delayed. In addition, a much better calyx spray was obtained by allowing the calyx to develop a well-defined cavity.

The application of the first cover spray on 6th November was according to the schedule, but could have been delayed a week. Following a minor peak on 24th November, a second cover spray was applied. Irrigation delayed this spray until 8th December, otherwise it would have been more desirable a little earlier in December. A



Graph 7.—Showing codling moth catches in 10 lure pots.—northern pears.

further spray was not applied until 8th February, following a marked second brood peak on the third of that month.

During the long interval between the second and third cover sprays, there was insufficient evidence to justify spraying, but if infection had been more intense, a cover spray towards the end of the second week in January would have been necessary to control infection from a minor brood of moths which emerged early in January. The continued activity of the second brood was responsible for an increased infection in the later varieties, particularly Jospehine, and an additional spray should have been applied to this variety.

For black spot control the schedule as outlined for pears was carried out on W.B.C., Beurre Bosc and Josephine varieties. The third Bordeaux mixture was omitted from Packham's Triumph and Winter Nelis because climatic conditions did not warrant its application, and it could have been omitted also from the other varieties. The black spot infection was negligible, the highest being 0·2 per cent. in William's Bon Chretien.

Harcourt.

The Harcourt demonstration of black spot and codling moth control in pears was conducted in the orchards of Messrs. T. Code and G. Douglas. The results obtained in the control of codling moth are referred to in Table VII. under the headings of Harcourt No. 1 and 2 respectively. The emergence of moths followed the same general course as on the apple plots in this district (lure graph 7).

Harcourt No. 1 (T. Code).

For codling moth control in William's Bon Chretien and Beurre Bosc, one calyx spray (3rd November), and four lead arsenate cover sprays, applied on 17th November, 1st December, 19th December and 21st January, were quite effective, and the very low percentage of infection, 0·2 and 0·3 per cent. respectively, at a cost of 5¼d. per tree, can be regarded as very satisfactory.

Black spot infection was low and amounted to 0·2 per cent. in W.B.C. and 0·4 per cent. in Beurre Bosc.

Harcourt No. 2 (G. Douglas).

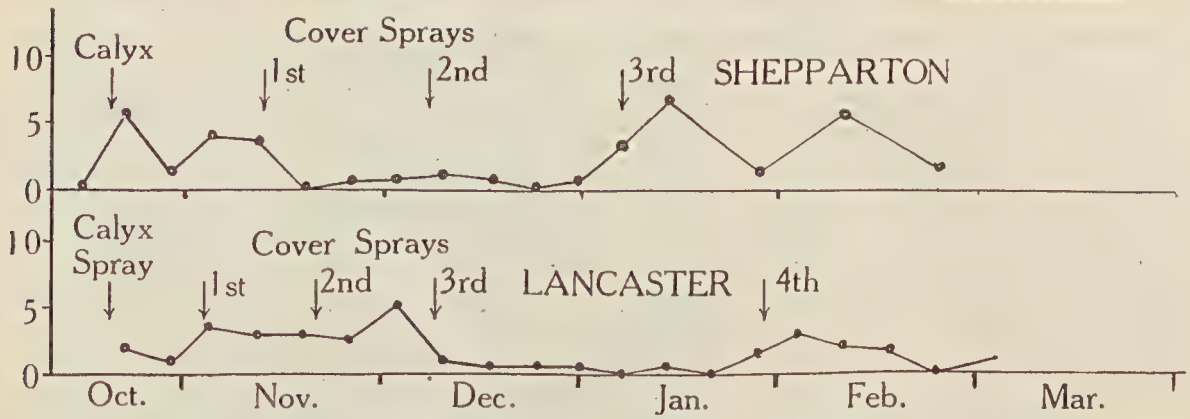
This plot included Josephine (138 trees), Winter Nelis (25 trees), and Packham's (28 trees). The timing of the sprays was practically the same as at Mr. Code's plot except that an additional spray was applied to Josephines in February. The results obtained with this programme (see Table VII.) were excellent and, in fact, the problem of codling moth control in pears at Harcourt was not a difficult one.

Winter Nelis showed a greater susceptibility to black spot infection than the other two varieties but, even so, the infection did not exceed 0·2 per cent.

Table VII.—Pear Plots—Northern Districts. Codling Moth Infection.

District.	Variety.	Number of Trees.	Average Yield of Fruits per Tree.	Codling Moth Infection Percentage of of Total Yield.*
				%
Harcourt—				
No. 1	W.B.C.	36	920	0·2
	Beurre Bosc	34	435	0·3
No. 2	Josephine	138	610	1·0
	Winter Nelis	25	1,100	0·2
	Packham's	28	310	1·6
Bamawm	Josephine	37	1,160	6·1
	Winter Nelis	44	463	1·9
	Packham's	40	700	6·2
	W.B.C.	66	388	3·6
	Beurre Bosc	57	620	2·3
Lancaster	W.B.C.	208	390	9·8
Ardmona	W.B.C.	106	1,095	1·8
Shepparton	W.B.C.	322	645	2·9

* Yield and infection include windfalls.



Graph 8.—Weekly totals of moths caught (10 lure pots)—Shepparton and Lancaster.

Shepparton.

The demonstration plot was located on Mr. W. Mulconry's orchard, Shepparton East, and comprised 322 William's trees. The number of moths caught in the lures was low (see Table V.), but indicated that the emergence of the spring brood moths, which commenced in October, was completed by the end of November. The emergence of a second brood commenced early in January.

To control codling moth one calyx spray and three cover sprays were applied. Actually a small portion of the block received an extra spray late in January, after the first harvest of fruit, but, owing to the relative inactivity of the second brood of moths, this spray was not necessary.

The timing of the sprays is indicated on the lure graph, and it will be noted that the calyx spray was delayed until 19th October. The first cover spray was applied on 12th November, eight days after the peak of moth emergence in early November. Two further cover sprays were applied on 7th December and 6th January.

For black spot control the sprays were applied according to the schedule for pears, and infection amounted to 0·1 per cent. only.

Lancaster.

The Lancaster plot which was situated on Mr. W. Young's property consisted of a block of 208 William's trees. From the point of view of codling moth control, the results obtained were poor. (See Table VII.). A feature of the lure records was the very low moth catch (see Table V.) and, further, the activity of the spring brood of moths was spread over a long period, from early in November until mid-December without a well-defined peak, and this fact made it difficult to apply sprays to the best advantage.

The number of lead arsenate sprays applied was five (including a single calyx spray) and the timing of these sprays is indicated on lure graph 8. The principal reason for the poor results obtained was the very inefficient spraying. At no time was the cover of lead arsenate satisfactory, and the high proportion of calyx infection (67 per cent. of the affected fruit) was due chiefly to the inefficient application of the calyx spray.

For black spot control the schedule was carried out in full, and a trace only (0·05 per cent.) of infection was recorded.

Black Spot Control.

The 1936–37 season was characterized by a dry spring in which the rainfall in September and November was much below normal. Although the amount of rain for October was normal, it was usually associated with cool windy weather. Consequently there was less risk of infection than usual, and further, it was possible to apply the sprays at the correct stages.

TABLE IX.—BLACK SPOT INFECTION.

District.	Variety.	Schedule.	Black Spot Infection.
			%
Drouin ..	Delicious ..	C	9·1
	Delicious ..	B	1·6
	Rome Beauty ..	C	2·1
	Rome Beauty ..	B	0·6
	Jonathan ..	A	Nil
	Jonathan ..	B	Nil
Wallington	Dunn's ..	A	0·4
	Rome Beauty ..	C	0·9
	Rome Beauty ..	C	0·3
	Delicious ..	..	Nil
Stanley ..	Granny Smith ..	C	3·3
	London Pippin ..	B	2·4

Two districts, Drouin and Stanley, with rainfalls of over 40 inches, were exceptional, the conditions being much more favorable for the

development of black spot. At Geelong, a mild infection of black spot occurred, but in all other districts, either the black spot infection was so low (less than 0·5 per cent.) as to be commercially negligible, or it was absent.

At Stanley and Drouin, schedule "B" was more effective because it provided protection over a longer period, whereas schedule "C" which had the advantage of using two Bordeaux mixture sprays, was confined to the pre-blossom spraying. In addition, at Drouin the failure to completely spray the tips of high leaders was a probable source of trouble.

Codling Moth Control.

It was to be expected that the demonstration plots, established as they were over a very wide range of conditions, would yield variable results with regard to the control of codling moth. Not only were there great variations in the initial moth population to be dealt with, but there was also a wide range of climatic conditions. On the whole, greater difficulty was experienced in controlling the insect in the northern districts than in the south, particularly in apples. Two districts, Stanley and Pakenham, experienced one brood only, and the less favorable conditions for the development of codling moth infection in those areas necessitated only three to four lead arsenate sprays.

Generally speaking, the 1936–37 season was not as difficult as usual for the control of codling moth, and, provided attention was paid to the efficient application and timing of sprays, good results were obtained. On the demonstration plots it was apparent that the problem of control was relatively a much more difficult one on apples than on pears.

It has already been shown (see August issue of this Journal) that in 1936–37 codling moth activity extended from early November until harvest time with the occurrence of two more or less distinct broods in spring and late summer. Consequently some measure of regular spraying was necessary throughout the season with particular attention to those vital periods following the emergence of the main broods.

In order to obtain the maximum effectiveness from the sprays applied during the season, it was necessary to determine the periods of greatest moth activity. This was done by means of lures, together with other observations. Lures proved to be of considerable value, particularly where efforts were directed as they should be, to the control of the first brood. Lure records, for instance, established the fact that the most important period for first brood control in 1936–37 was, in most districts, mid-December. Because this vital period may vary from season to season, it can be seen that lures provide a valuable basis for the timing of the most important sprays. Reference should be made to the August Journal for further information on lures.

Many growers availed themselves of the information provided by the orchard supervisors for the timing of the essential sprays, and appreciation of this service was expressed in many quarters. Such information was not based on lure records alone, but on all the evidence that it was possible for the supervisors to obtain by careful observations and a knowledge of the life history of codling moth.

The schedule of lead arsenate sprays provided satisfactory control of codling moth on pears, provided sprays were timed carefully and thoroughly applied. For apples, two spray schedules were adopted, one of lead arsenate cover sprays and the other in which white oil sprays replaced the later lead arsenate sprays. The advantage of the latter programme was the elimination of an excessive arsenical residue, and hence the elimination of the necessity for washing or hand wiping the fruit.

On all the larger apple plots the two schedules were demonstrated side by side. The smaller plots, as at Quantong, Amphitheatre, and Harcourt (T. Code) were sprayed entirely according to Schedule "B" (lead arsenate followed by white oil sprays), while at Stanley and Pakenham lead arsenate sprays only were required.

From a control point of view it is desirable that the use of white oil sprays be accompanied by some degree of improved control, even though its use could be justified alone by the extra cost of hand-wiping or washing that is necessary in most cases where straight lead arsenate sprays are used.

The differences of infection recorded with the two schedules in the 1936–37 season were scarcely significant, and this was particularly so in the southern districts. This was due largely to the fact that codling moth activity was relatively low in the summer of 1936–37 and therefore the results obtained with white oil sprays, which are essentially ovicides, were not very outstanding. In certain instances, as at Strathfieldsaye and Harcourt, white oil was introduced for the control of the first brood, and the superior control obtained with the "B" schedule in these two cases, indicated that oil could effect better control provided it was applied when eggs were abundant. At

Field day at Mr. J. McI. Sinclair's orchard, Bamawm Extension.

Harcourt, however, the use of oil in this way proved very costly, while at Strathfieldsaye codling moth infection was rather high.

The poor results obtained at Quantong, Pomonal and Amphitheatre were due to combinations of factors such as light crops, heavy initial infestation, and the failure to obtain good covers of lead arsenate. In the latter respect, it was felt that the spreader used (lime casein) was not always satisfactory, although under certain conditions of application excellent covers were obtained.

Chemical bands were used on all plots, and except in a few instances, where only a trace of infection was recorded, their use was decidedly an advantage.

Recommendations for the Control of Codling Moth.

During the coming season, it is expected that a number of lure-pots will be maintained by the orchard supervisors in each district so that growers may be advised of the optimum times of applications of sprays in order to achieve maximum effectiveness from them. There is no reason why growers themselves should not establish lure-pots. It is considered that twenty pots will give an accurate guide and these can be concentrated fairly closely in a typical part of the orchard. (For further information in regard to the use of lures, see the August issue of this *Journal*).

It should be clearly understood that the object of using the information derived from the lure records was to modify the distribution of the sprays, and so ensure that they were applied at the most effective time. This made it possible in some cases to reduce the number of sprays to a minimum, consistent with the maintenance of control.

It is highly desirable to control, as effectively as possible, the spring brood of codling moths, otherwise the control of the second brood will be made more difficult. In order to do this the timing of the sprays must be correct, their application thorough, and a good cover of lead arsenate must be maintained.

The object of using white oil sprays in the schedule for apples was to minimize the arsenical residue problem, and at the same time, maintain control of codling moth. To use white oil, accurate timing is absolutely essential. Although oil was used effectively in certain instances for first brood control (in December) its introduction so early in the season raised the costs of spraying very considerably. For the time being growers would be wise to delay the use of 1 : 60 oil sprays till later in the season. In order to avoid excess arsenical residue, lead arsenate should not be applied within eight weeks of harvest.

White oil sprays should not be applied to the variety Cleopatra, which is likely to be severely stained, particularly late in the season.

The recommended strength for lead arsenate is 5 lb. of paste or 2½ lb. of powder in 80 gallons of water, while summer white oil sprays should be used at a strength of 1 : 60.

One of the simplest supplementary methods of control is the use of either chemical or hessian bands placed on the trunks of the trees to trap codling in larvae after they have left the fruit. Bands enable the intensity of the second brood to be diminished, and also a substantial reduction of the carry-over from one season to the next.

Finally, the need for thorough orchard sanitation cannot be overstressed. Scraping of the fork and butts of the trees during winter will not only destroy numerous larvae, but will enable bands to operate more efficiently. The packing shed is a constant source of trouble because of the accumulation of infected fruit and such fruit should be destroyed as soon as possible after rejection. Other common sources of trouble are "tree props" and second-hand cases which are frequently loaded with larvae.

Chemical Bands.

On the demonstration plots all trees (approximately 6,500) were bandaged with corrugated

cardboard chemical (beta-naphthol-oil) bands. It had been proved in previous years that these were a valuable adjunct to spraying as a means of controlling codling moth and the results obtained on the plots this year gave further support to this practice. In all about 50,000 larvae were trapped—an average of eight per band.

The chemical bands were placed in position during the last two weeks of November and were not removed until after harvest when all windfalls had been destroyed. Observations of the activity of codling moth larvae this season indicated that these bands should be applied not later than the second week in December. On removal the bands were examined in detail and counts made of the numbers of larvae (dead and alive), the number of pupae, and the number of emergences as indicated by empty pupal cases.

In addition to obtaining an indication of the efficiency of the bands in destroying the larvae, this examination made it possible to obtain information on the distribution of the larvae throughout the plot and the relation of number of larvae caught, to the total number of infected fruit.

In no case did the emergence of moths from chemical bands exceed 4 per cent. of the total number of grubs entering them, and in most cases the figure was approximately 1 per cent. On the average, the bands destroyed 98 per cent. of the larvae entering them.

The records indicate that the bands on the plots caught an average of 50 per cent. of the larvae which survived the spray programme. At Drouin, 3,623 larvae were destroyed by the bands and in consequence the population of over-wintering larvae was materially reduced.

At Pomonal, the catch represented 15 per cent. only, of the estimated population of larvae. This result is attributed partly to a fault in the bands. In some cases, the rolls, which had been " double dipped " during manufacture, had the corrugations filled up with wax, so that larvae could not enter. Growers, when purchasing chemical bands should look for this point and purchase only bands which are free from this defect. Careful observation was made to see if the chemical bands caused an injury to the bark on the butt of the tree. In no case was a definite injury apparent, although there was a general discolouration of the bark where the bands were applied.

Applying bands as late as possible and removing them at the conclusion of harvesting, after the destruction of windfalls, minimizes any injurious effect they may have on the tree.

Examination of the bands on the pear plot (Packham's Triumph) at East Burwood showed a catch of only 89 larvae in 280 bands. In contrast, at Doncaster with a later variety of pear, viz., Josephine, the catch in 252 bands was 537 larvae an average of slightly more than two larvae per band.

With late varieties of pears and under conditions of high moth population, bandaging of trees is especially important, and should be regarded as part of the normal seasonal routine for codling moth control. The counts of larvae made showed that the numbers in the bands around packing sheds were considerably higher than elsewhere so that the need for bandaging these trees in particular is evident.

The cost of materials and application of bands amounts to 1¼d. per tree, and by preparing their own bandages, growers may be able to reduce this cost. The total cost of application of a single lead arsenate spray (including materials, labour, depreciation of pump, &c.), would amount to approximately 2½d. per tree, so that for about half the cost of a spray, growers can take steps to secure a definite reduction of the moth population on their orchard.

Cost of Spray Materials.

A careful check was kept on the quantities of spray applied on all plots, and the costs of spray materials for each schedule and variety are shown in Tables VIII. and IX.

The figures represent the cost of spray materials per tree, and are based on prices current during 1936–37, viz., lead arsenate (paste) 5½d. per lb., white oil 4s. 3d. per gallon, lime suplhur 1s. 4d. per gallon, bluestone 30s. per cwt., slaked lime 2s. 9d. per 50 lb. bag, and lime casein spreader 9d. per lb. These prices are f.o.r., Melbourne. The costs per gallon (material only) of these sprays are as follows—lead arsenate 0·4d., Bordeaux mixture (6 : 4 : 40) 0·5d., white oil 1d., lime sulphur (3 : 80) 0·6d., (2 : 80) 0·4d.

Costs of application have not been computed; but are estimated at 2d. per tree per application. This cost has not been included in Tables VIII. and IX. The costs per tree are influenced by the number of sprays and the amount of spray used at each application. The latter is governed largely by the size of the tree and the crop it is carrying, e.g., at Wallington (Table VIII.) on Dunn's, where eight lead arsenate sprays were applied at a total cost of 4¾d., 1¼ gallons only of spray mixture per tree was necessary at each application. In contrast, on Rome Beauty trees

TABLE VIII.—COST OF SPRAY MATERIALS—SOUTHERN PLOTS.

District.	Variety.	Schedule.	Number of Lead Sprays.	Cost per Tree.	Number of Oil Sprays.	Cost per Tree.	Total Cost Codling Moth Control.	Costs Black Spot Control.	Total Cost Spray Materials per Tree.
				s. d.		*s. d.*	*s. d.*	*s. d.*	*s. d.*
APPLES.									
Drouin	Jonathan ..	A	5	0 4	..	..	0 4	0 3	0 7
	Jonathan ..	B	4	0 3¼	2	0 5½	0 8¾	0 3	0 11¾
	Rome Beauty ..	C	5	0 6	..	..	0 6	0 2½	0 8½
	Rome Beauty ..	B	3	0 3½	2	0 8	0 11½	0 4½	1 4
	Delicious.. ..	C	6	0 3¾	..	..	0 3¾	0 2	0 5¾
	Delicious.. ..	B	4	0 2½	2	0 4	0 6½	0 4¼	0 10¾
Pakenham ..	Jonathan‡ ..	A	3	0 2½	..	..	0 2½	0 3	0 5½
	Jonathan ..	B	4	0 3	1	0 4*	0 3	0 3	0 10
Tyabb	Jonathan ..	A	6	0 4½	..	..	0 4½	0 2¾	0 7¼
	Jonathan ..	B	4	0 2¾	2	0 4	0 6¾	0 2¾	0 9½
Red Hill	Jonathan ..	A	6	0 6	..	..	0 6	0 5½	0 11½
	Jonathan ..	B	4	0 4	2	0 4½	0 8½	0 5½	1 2
	Rome Beauty ..	A	6	0 4½	..	..	0 4½	0 4	0 8½
	Rome Beauty ..	B	3	0 2¼	3	0 6	0 8¼	0 4	1 0½
Wantirna	Jonathan ..	A	7	0 6¼	..	..	0 6¼	0 3¼	0 9½
	Jonathan ..	B	3	0 2½	4	0 8	0 10½	0 3¼	1 1¾
Croydon	Jonathan† ..	A	6	0 4¼	..	..	0 4¼	0 3	0 7¼
	Jonathan ..	B	4	0 2½	5	0 10	1 0½	0 3	1 3½
Panton Hill ..	Jonathan ..	A	6	0 9½	..	..	0 9½	0 4	1 1½
Bacchus Marsh ..	Jonathan ..	A	5	0 4½	..	..	0 4½	0 2¾	0 7¼
	Jonathan ..	B	3	0 2½	3	0 6	0 8½	0 2¾	0 11¼
Wallington ..	Dunn's	A	8	0 4¾	..	..	0 4¾	0 1½	0 7¼
	Delicious.. ..	B	3	0 2½	4	0 8	0 10½	0 2	1 0½
	Rome Beauty ..	B	2	0 1½	5	0 7½	0 9	0 1½	0 10½
	Rome Beauty ..	C	6	0 3	..	..	0 3	0 0¾	0 3¾
PEARS.									
Tyabb	Packham's Triumph	Lead	4	0 4	2	0 6	0 10	0 3½	1 1½
East Burwood ..	Packham's Triumph	Lead	5	0 3½	..	..	0 3½	0 2	0 5½
Croydon	Beurre Bosc ..	Lead	7	0 5¾	..	..	0 5¾	0 2¾	0 8½
Doncaster ..	Josephine ..	Lead	7	0 6	..	..	0 6	..	..

* This was a combination spray of nicotine sulphate and white oil for the control of Woolly Aphis.
† Cost of spray materials for Democrat "A" and "B" on this plot was the same as Jonathan "A" and "B"
‡ Cost of spray materials for Yates and Delicious on this plot was the same as for Jonathan "A".

Table IX.—Cost of Spray Materials—Northern Plots.

District.	Variety.	Schedule.	Number of Lead Sprays.	Cost per Tree.	Number of Oil Sprays.	Cost per Tree.	Total Cost Codling Moth Control.	Costs Black Spot Control.	Total Cost Spray Materials per Tree.
				s. d.		*s. d.*	*s. d.*	*s. d.*	*s. d.*
				Apples.					
Quantong	Cleopatra ..	B	4	0 3¼	3	0 7½	0 10¾	0 0½	0 11¼
	Rome Beauty ..	B	4	0 3¼	6	0 10½	1 1½	0 0¾	1 2¼
	Rokewood ..	B	4	0 1½	5	0 4½	0 6	0 0½	0 6½
Pomonal	Cleopatra ..	B	4	0 3¼	5	0 10	1 1¼	0 1½	1 2¾
	Cleopatra ..	C	6	0 4¾	2	0 3½	0 8¼	0 1½	0 9¾
Amphitheatre ..	Dunn's	B	5	0 3½	5	0 4½	0 8	0 2½	0 10½
	Jonathan ..	B	5	0 3½	5	0 5	0 8½	0 2¼	0 10¾
	London Pippin ..	B	4	0 2¾	5	0 3½	0 6¼	0 3	0 9¼
Stanley	Granny Smith ..	C	4	0 4½	..	..	0 4½	0 2¼	0 6¾
	London Pippin ..	A	3	0 3½	..	..	0 3½	0 7½	0 11
Harcourt No. 1 ..	Dunn's	B	3	0 3½	4	0 10	1 1½	0 4	1 5½
Harcourt No. 3 ..	Dunn's	B	3	0 4¼	4	1 0	1 4¼	0 5	1 9¼
	Jonathan ..	B	3	0 4¼	5	1 5½	1 9¾	0 5	2 2¾
	Jonathan ..	A	6	0 8½	2	0 6¼	1 2¾	0 5	1 7¾
Strathfieldsaye ..	Dunn's	A	7	0 7¼	..	..	0 7¼	0 5¾	1 1¼
	Dunn's	B	3	0 3¼	4	0 8½	0 11¾	0 5½	1 5¼
	Cleopatra ..	B	3	0 3¼	4	0 8½	0 11¾	0 5½	1 5¼
	Cleopatra ..	C	3	0 3¼	4	0 8½	0 11¾	0 2¼	1 2
	Granny Smith ..	B	3	0 3	5	0 10	1 1	0 4½	1 5½
	Granny Smith ..	C	3	0 3	5	0 10	1 1	0 2	1 3
				Pears.					
Harcourt No. 1 ..	W.B.C.	Lead	5	0 5¼	..	..	0 5¼	0 4½	0 9¾
	Beurre Bosc ..	Lead	5	0 5¼	..	..	0 5¼	0 4½	0 9¾
Harcourt No. 2 ..	Josephine ..	Lead	6	0 6	..	..	0 6	0 1¾	0 7¾
	Winter Nelis ..	Lead	6	0 6	..	..	0 6	0 4½	0 10½
	Packham's Triumph	Lead	6	0 6	..	..	0 6	0 4½	0 10½
Bamawm	Josephine ..	Lead	4	0 7¼	..	..	0 7¼	0 2	0 9¼
	Winter Nelis ..	Lead	4	0 4½	..	..	0 4½	0 2½	0 7
	Packham's Triumph	Lead	4	0 4½	..	..	0 4½	0 2½	0 7
	Beurre Bosc ..	Lead	4	0 5½	..	..	0 5½	0 3¾	0 9¼
	W.B.C.	Lead	4	0 4½	..	..	0 4½	0 3	0 7½
Kyabram	W.B.C.	Lead	5	0 4½	..	..	0 4½	0 3½	0 8
Ardmona	W.B.C.	Lead	4	0 7¼	..	..	0 7¼	0 5¼	1 0½
Shepparton ..	W.B.C.	Lead	5	0 4½	..	..	0 4½	0 4¼	0 8¾

at Drouin, where three gallons of spray per tree was necessary, five applications of lead arsenate cost 6d. per tree for materials.

The size of the tree and the amount of spray applied has an even greater influence on the cost of spraying when white oil sprays are used, owing to the higher cost of this material. This is supported by the figures for the cost of spraying on northern district plots (Table IX.) where white oil was used more extensively than in the south. The contrast in costs, caused by different rates of application of spray mixtures, is revealed in this table. In the Quantong, Pomonal and Amphitheatre districts the rates of application were considerably lower than in the Harcourt and Strathfieldsaye districts so that spray costs were proportionately reduced.

Owing to the use of straight lead arsenate sprays and the fewer number of sprays applied, the costs per tree for codling moth control in pears are appreciably less than in apples.

Showing the effects of lime-sulphur injury.

Spray Injury.

Insect and fungous control in the orchard depends on the use of materials which are destructive to insects or fungi, and it is desirable, at the same time, that they be non-injurious to the trees thus protected. Materials which combine these qualities are rare, and although the spray materials used in Victoria have been standardized with a view to minimizing spray injury and achieving efficiency in control, spray injury does occur under certain conditions.

In general, high temperatures increase the danger of spray injury, particularly with lime sulphur spraying, although severe lime sulphur injury has been observed with moderate or even low temperatures. The humidity has an important influence on the rate of drying and under conditions of high humidity, injury is likely to occur even at the lower temperatures.

The health of the tree and the condition of the foliage, together with the concentration of the spray and the rate at which it is applied, are also factors contributing to the likelihood of spray injury. The 1936–37 season was notable for its varied climatic conditions and this undoubtedly influenced the spray injury—chiefly due to lime sulphur and lead arsenate—that occurred in some of the demonstration plots.

It is proposed to investigate the problem of spray injury during the approaching season.

Spray injury.—Left, trees sprayed with straight lead spray (A schedule). Right, lead arsenate followed by white oil (B schedule). Note the defoliation on the A schedule trees.

Lime Sulphur.

Lime sulphur was responsible for a mild spray injury on seven plots, viz., Stanley, Harcourt, Strathfieldsaye, Panton Hill, Bacchus Marsh, Pakenham and Drouin. The injury which followed the application of 3 : 80 lime sulphur at 5 to 10 per cent. blossom stage (except at Pakenham and Panton Hill) took the form of a marginal burn on the leaves and tree growth was checked for a period of seven to fourteen days.

Bordeaux injury on Packham's Triumph pears.

Leaves became distorted, and the foliage of the trees, which had received lime sulphur sprays was, throughout the season, a distinct contrast to the dark healthy green foliage of the trees sprayed with Bordeaux mixture. Certain varieties, particularly Granny Smith, were more susceptible to injury, and the trees making normal healthy growth were less susceptible and recovered in a shorter time than those which were less vigorous and making poor growth. Lime sulphur sprays were associated with fruit russet at Pakenham, but on no plot was it necessary to reject any quantity of fruit at harvest time on account of blemishes caused by lime sulphur injury.

Owing to the increase in polysulphide content of lime sulphur sprays last season (from 15 to 20 per cent.) growers who experienced trouble with lime sulphur injury would be advised to reduce the strength of these sprays accordingly. (See Recommendations for control of Black Spot—August *Journal*.)

The risk of injury can also be minimized by avoiding, where practicable, mixing lime sulphur with lead arsenate sprays. Where these two sprays are combined particular attention should be given to thorough mixing. Lead arsenate should be mixed with water until it is the consistency of a thin cream and added to the diluted lime sulphur and spreader in the vat immediately before spraying.

On no account should lime sulphur be applied within three weeks of a white oil spray.

Bordeaux Mixture.

Owing to the susceptibility to russet of certain apple varieties, viz., Jonathan, Yates, London Pippin and Dunn's, the use of a program of Bordeaux mixture sprays for black spot control on these varieties is not recommended. Bordeaux mixture (6 : 4 : 40) sprays can usually be safely applied to the above varieties at the green-tip stage, but the risk of spray injury when applied later than this stage is very definite.

On the plots at Pakenham Upper and Bacchus Marsh, the application of Bordeaux mixture 6 : 4 : 40 at the green-tip stage to Jonathan trees caused russet which in a few cases resulted in the fruit splitting badly.

The uneven manner in which the buds opened at the beginning of the season was a factor influencing this russet, as it was noticeable that it was more pronounced on the more forward tips and laterals.

Arsenical Injury.

Owing to the established use of the acid form of lead arsenate spray, injuries due to soluble arsenic are not uncommon. On most of the demonstration plots a very slight arsenical injury was apparent on the foliage, but at Panton Hill and Wantirna the injury which took the form of brown spots on the leaf, usually marginal or near the tip, was more serious and was partly responsible for premature defoliation.

Another form of arsenical injury occurred on the fruit of Jonathan apple trees at Harcourt. The injury took the form of purplish semi-circular areas, chiefly on the lower surfaces of the fruit, and occurred in December following the application of white oil in the presence of a heavy residue of lead arsenate.

Acknowledgments.

These demonstration plots could not have been established without the assistance and co-operation of the owners of the various orchards, and their willing help is appreciated. The local committees of growers also rendered valuable assistance and their support is gratefully acknowledged.

Orchard and Garden Notes

By Edward E. Pescott, F.L.S.

The Flower Garden.

WE are now in the midst of the daffodil season. The after-care of the plants is all important; and neglect of the bulbs, after the flowering period, often means a failure to obtain flowers in the subsequent season. After flowering, watering should be continued until the end of October, when the bulbs may be allowed to dry off slowly. Daffodil bulbs should not be left in the same place for more than three years; otherwise they will become overcrowded by natural increase, and will not produce flowers freely.

Present prospects indicate that this will be a good season for roses. The bushes should be "gone over" when the buds are moving, and all superfluous buds rubbed off. Where two or three grow out of one location, two should be rubbed off, and only one left to develop. Buds growing into the centres and which are likely to overcrowd should also be rubbed off.

Whenever rose aphis appears, it must be well sprayed with nicotine sulphate. One spraying may not be sufficient. Apart from the fact that aphis destroys many rose growths, it is credited with being a distributor of disease.

The Orchard.

Spraying for black spot of apples and pears is now the order of the day. The usual black spot programme for pears will be a 6.4.40 Bordeaux at the green tip and again at the early pink stage, with three sprays of 3.3.50 Bordeaux commencing three weeks after the fruit has formed. This applies to all varieties except Josephine de Malines. This pear should receive one pre-blossom spray of 6.4.40 Bordeaux in the early green tip stage. No more Bordeaux must be given, but a few ounces of bluestone should be put into the second arsenate of lead spray. Where limil is used in the place of lime, the strength should be 6.6.40.

Apples which russet easily, such as Jonathan, should receive a 6.4.40 Bordeaux at the green tip stage; lime sulphur 2 in 80 at petal fall, and fourteen days later a lime sulphur spray 1½ in 80 gallons water.

All other apples may be given Bordeaux 6.4.40 at the green tip stage; 6 lb. limil may be substituted for rock lime if required. Bordeaux at 3.3.50 is the next spray in the very early pink stage; then 6 ounces of bluestone and 6 ounces of limil should be added as a base spreader to every 80 gallons of arsenate of lead spray.

The Vegetable Garden.

Tomato growers should note the report on tomato varieties which appeared in the July issue of this Journal. The type of tomato now recommended is one that has a perfectly smooth surface, free from central eye depressions and from corrugations or ridges. Further, it should be a very fleshy one, with few seeds, and with a very small seed cavity. Large seed cavities, giving a semi-hollow tomato, are objectionable and unprofitable. The varieties generally recommended for this season are Eccles Surprise, Kondine Red and Red Marhio.

[*Continued on page* 468.

Book Reviews

CANNING PRACTICE AND CONTROL.

Osman Jones, F.I.C., and T. W. Jones, B.Sc. (Chapman and Hall, London. 254 pp. 25/- English Price.)

In this, the most ambitious publication of its kind from an English source, the wide definition has been adopted that canned food is foodstuff hermetically sealed and processed in a metal container, and canned fruits, fish, vegetables and meats are covered.

The title of the book is somewhat misleading in that the "Practice" of canning is disposed of in one chapter of 28 pages, apart from an even shorter preliminary chapter on the construction and equipping of a cannery. Further, the various types of canned food are considered together, suggesting similarity of treatment, although this is in fact, far from the case. From this aspect the book is not particularly valuable to the practical canner.

The bulk of the book is concerned with cannery control. Five chapters are devoted to the establishment of a laboratory and the chemical examination of raw and canned products, the can itself, and water supplies for a cannery. Much of this section repeats chemical methods already available in many chemical text books and the chapter dealing with the establishment of a laboratory and the functions of a chemist seems rather unnecessary. This whole section of the book could have been considerably reduced with benefit.

Microbiology and its application to canning are dealt with in five chapters, which, after a general outline, discuss culture media and microbiological technique and their specific application to the principal food-spoiling organisms, which are fully listed. This section is very fully covered and should be of decided value to persons interested in this aspect of canning control.

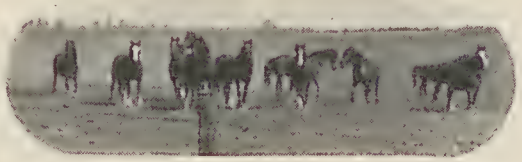
The final chapters deal with cannery waste and hygiene and the effect of canning on nutritive values of food. The book is very well printed and profusely illustrated, and a select bibliography is listed at the end of each chapter. It could have been condensed with benefit and a better balance between practice and control would be expected from the title.

HERBAGE ABSTRACTS.

The Imperial Bureau of Plant Genetics: Herbage Plants has recently initiated an addition to its series of publications which should engender an immediate response from all who are interested in maintaining records in good order.

Herbage Abstracts, beginning with Volume 7, No. 1 (March, 1937) may be obtained printed on one side of the paper only. The pages of this special issue can be cut up by abstracts and each abstract mounted on an index card, thus saving typing a copy. The arrangement of abstracts under sub-headings of the three major groups of Herbage and Forage Plants, Plant Biology, and Agronomy, facilitates the setting up of the card index reference.

Naturally, such an issue costs more but it is quite reasonable, for so useful a publication, at £1, a price which also includes Herbage Reviews, printed in the usual way.



Standard Herd Records

For Quarter ended 30th June, 1937

In the following is set out the records of all cows which completed a lactation during the quarter. The number is 638, of which 513 qualified for the certificate. The figure in brackets after the owner's name shows the number of entries.

The amount of butter-fat required for qualification varies according to the age of the animal (up to five years at time of calving), the standard being as follow:—

Junior 2 year old (under 2½ years at time of calving)	230 lb. butter fat.
Senior 2 year old (between 2½ and 3 years at time of calving)	250 lb. butter fat.
Junior 3 year old (between 3 and 3½ years at time of calving)	270 lb. butter fat.
Senior 3 year old (between 3½ and 4 years at time of calving)	290 lb. butter fat.
Junior 4 year old (between 4 and 4½ years at time of calving)	310 lb. butter fat.
Senior 4 year old (between 4½ and 5 years at time of calving)	330 lb. butter fat.
Mature cow 5 years and over	350 lb. butter fat.

(Except where otherwise stated, the period of Test was 273 days.)

Name of Cow.	Herd Book No.	Date of Calving.	Milk last day of Test. lb.	Milk. lb.	Average Test.	Butter Fat. lb.	Standard required.	Class.	Previous Yields of Butter Fat.	Sire.
Abrecht, H. L., Morwell, Jersey (3).										
Rintoul View Emerald	38209	25.9.36	7	5,949	5·48	325·90	350	Mature	..	Banyule Triplane
Yuleba Lotus Lily	Vol. 24	25.9.36	4½	4,844	5·04	244·18	230	Jr. 2	..	Latrobe Lotus Laddie
Yuleba Lotus Lily 2nd	Vol. 24	19.9.36	5	4,454	5·72	254·99	230	Jr. 2	..	Latrobe Lotus Laddie
Alston, N. B., Romsey, Jersey (5).										
Rosyth Gay Bonnie	Vol. 24	5.9.36	6½	3,590	5·82	209·10	230	Jr. 2	..	Werribee Gaypiece
Rosyth Gay Brownie	Vol. 24	2.9.36	6½	3,276	5·87	192·44	230	Jr. 2	..	Werribee Gaypiece
Rosyth Meadow Lark	55126	21.9.36	10	4,568	6·06	276·98	270	Jr. 3	330	Werribee Gaypiece
Rosyth Noble Duchess 2nd	Vol. 24	16.7.36	9	4,427	5·48	242·41	230	Jr. 2	..	Werribee Gaypiece
Rosyth Rosebud	46073	25.9.36	8	6,282	5·08	319·32	350	Mature	246, 290, 399	Aveley Antony
Atkinson, W. K., Swan Hill, Dairy Shorthorn (13).										
Willow Park Comet 9th	D.S.H.B.	9.9.36	26	10,158	3·99	405·64	310	Jr. 4	343, 360	Willow Park Imperial 3rd
Willow Park Comet 14th	D.S.H.B.	2.9.36	22	7,160	4·05	289·86	230	Jr. 2	..	Wicklesham Lord Barrington 5th (Imp.)
Willow Park Countess 13th	D.S.H.B.	1.9.36	23	7,887	4·10	323·46	250	Sr. 2	..	Willow Park Lustre 3rd
Willow Park Countess 15th	D.S.H.B.	14.9.36	21	8,535	3·73	318·68	250	Sr. 2	..	Willow Park Silvermine 4th
Willow Park Dainty 4th	D.S.H.B.	18.7.36	27	10,142	4·32	437·70	350	Mature	333, 385, 367	Willow Park Eminent
Willow Park Dainty 5th	D.S.H.B.	25.9.36	21	11,496	4·37	502·26	350	Mature	374, 473, 510, 546	Willow Park Banker 2nd
Willow Park Dainty 8th	D.S.H.B.	28.7.36	32½	9,923	3·95	391·79	290	Sr. 3	301	Willow Park Sherlock
Willow Park Duchess 23rd	D.S.H.B.	23.7.36	25	8,747	4·10	359·01	290	Sr. 3	332	Willow Park Silvermine 4th
Willow Park Fairy 8th	D.S.H.B.	27.7.36	18½	7,654	3·82	292·72	290	Sr. 3	279	Willow Park Silvermine 4th
Willow Park Melba 11th	D.S.H.B.	25.8.36	19½	9,668	3·82	369·41	310	Jr. 4	342, 375	Willow Park Imperial 3rd
Willow Park Melba 13th	D.S.H.B.	9.8.36	31	10,685	3·79	405·45	290	Sr. 3	349	Willow Park Silvermine 4th
Willow Park Melba 23rd	D.S.H.B.	8.9.36	10	5,328	4·14	220·53	230	Jr. 2	..	Wicklesham Lord Barrington 5th (Imp.)
Willow Park Queenie 33rd	D.S.H.B.	8.9.36	19	9,060	4·00	362·70	250	Sr. 2	289	Willow Park Imperial 3rd
Ballarat Orphanage, Ballarat, Jersey (19).										
Banyarra Aria 2nd	47113	7.9.36	21	7,628	5·63	429·26	270	Jr. 3	274	Retford King Bracken
Jubilee Linum	Vol. 24	15.7.36	20	7,077	4·89	346·15	250	Sr. 2	..	Jubilee Whatlight
Orphanage Attraction 3rd	41396	30.7.36	16	8,093	5·25	424·96	330	Sr. 4	274	Orphanage Quicksand's Prince
Orphanage Attraction 5th	C.R.	1.7.36	18½	7,599	5·59	425·14	290	Sr. 3	..	Jerseylea Quality Boy
Orphanage Attraction 8th	54571	21.8.36	17½	6,840	4·87	333·18	250	Sr. 2	..	Jerseylea Quality Boy
Orphanage Attractive 3rd	41397	16.9.36	16	8,003	5·13	410·40	350	Mature	253	Orphanage Quicksand's Prince
Orphanage Audrey's Molly 2nd	41398	8.9.36	18½	9,414	4·86	457·52	350	Mature	290, 262	Wompini V.C.
Orphanage Audrey's Molly 4th	54573	15.8.36	20½	8,693	4·52	392·81	290	Sr. 3	..	Murona Airmine
Orphanage Clara 2nd	54575	16.9.36	13	5,651	5·75	324·93	250	Sr. 2	..	Jerseylea Quality Boy
Orphanage Doris 3rd	49968	14.8.36	17½	7,660	4·60	352·17	290	Sr. 3	..	Murona Airmine
Orphanage Garenne 6th	54577	16.9.36	12	5,177	6·48	335·58	250	Sr. 2	..	Jerseylea Quality Boy
Orphanage Lady 4th	C.R.	29.8.36	17	6,099	5·75	350·90	230	Jr. 2	..	Jerseylea Quality Boy
Orphanage Maud	41404	11.8.36	18	7,559	5·56	420·17	350	Mature	315	Orphanage Quicksand's Prince
Orphanage Mirthmaker 7th	Vol. 24	8.9.36	19	6,661	4·88	324·93	230	Jr. 2	..	Orphanage Molly's Thorn
Orphanage Molly 4th	Vol. 24	22.9.36	20½	5,950	6·01	357·51	250	Sr. 2	..	Jerseylea Quality Boy
Orphanage Pearl 5th	41409	27.8.36	20	8,136	5·15	419·10	350	Mature	252	Orphanage Quicksand's Prince
Orphanage Quicksand 4th	49377	23.9.36	18½	6,488	6·07	393·84	290	Sr. 3	..	Jerseylea Quality Boy
Orphanage Quicksand 5th	Vol. 24	18.9.36	13½	6,501	5·32	346·03	270	Jr. 3	..	Banyule Silverstone
Orphanage V.C.'s Molly	36860	16.7.36	21½	8,285	4·61	381·74	350	Mature	367, 443, 319, 429	Wompini V.C.

Standard Herd Records—*continued.*

Name of Cow.	Herd Book No.	Date of Calving.	Milk last day of Test. lb.	Milk lb.	Average Test.	Butter Fat. lb.	Standard required.	Class.	Previous Yields of Butter Fat.	Sire.
Bassett-Smith, C., Kyabram, Red Poll (3).										
Temperley Air Plane ..	2988A	22.8.36	8	7,599	4·58	348·07	350	Mature	280, 307, 284, 312	Corriedale Royal Favourite
Temperley Air Star ..	4841A	12.7.36	27½	7,619	4·56	347·79	290	Sr. 3	226 ..	Temperley Bright Star
Temperley Sweet Pear ..	4503AA	23.8.36	16	8,332	3·79	315·99	330	Sr. 4	191, 260, 274	Earl of Beaconsfield
Belfield, Mrs. V. M., Coleraine, Jersey (2).										
*Dalray Larkspur Surprise	23250	8.8.36	4	3,390	5·34	180·93	350	Mature	354, 456, 398	Twinkles Twylish of Aveley
Wootong Vale Sovereign Queen	21117	5.8.36	6	5,283	5·20	274·49	350	Mature	345, 434, 426, 429	Gold Prince of Clover Flat
Bidgood Bros., Staghorn, Jersey (9).										
Staghorn Aldan's Larkspur 2nd	50633	22.9.36	16	8,061	5·89	474·70	310	Jr. 4	421 ..	La Sente's Lord Aldan (Imp.)
Staghorn Flashlight's Fern 2nd	Vol. 24	19.7.36	11½	4,538	5·16	234·18	230	Jr. 2	.. ..	Nancy's Noble (Imp.)
Staghorn Noble Larkspur 2nd	C.R.	4.9.36	14½	5,319	4·13	219·80	230	Jr. 2	.. ..	Nancy's Noble (Imp.)
Staghorn Master's Belle 2nd	28450	23.8.36	17½	8,920	5·34	476·62	350	Mature	413, 444, 547	Werribee Northern Masterpiece
Staghorn Master's Grace ..	46202	23.9.36	17½	6,830	5·53	377·40	330	Sr. 4	253, 458 ..	Werribee Northern Masterpiece
Staghorn Noble's Clementine 3rd	55284	2.9.36	14	7,199	5·07	365·25	270	Jr. 3	330 ..	Nancy's Noble (Imp.)
Staghorn Noble's Clementine 4th	Vol. 24	26.7.36	13½	4,927	5·58	274·89	230	Jr. 2	.. ..	Staghorn Lord Madeira
Staghorn Noble's Lotus 2nd	55286	25.9.36	18	6,726	4·55	306·24	270	Jr. 3	317	Nancy's Noble (Imp.)
Staghorn Noble's Lotus 3rd	Vol. 24	19.7.36	10	4,785	4·82	230·57	230	Jr. 2	.. ..	Nancy's Noble (Imp.)
Bigger, R., Monomeith, Jersey (1).										
Walora Park Carita ..	51056	18.9.36	16	6,741	5·32	358·43	270	Jr. 3	.. ..	Glenavon Diana's Prince
Black, Mrs. A. J., Noorat, Jersey (1).										
Noorat Sundew	45467	3.8.36	23	7,692	5·61	431·83	310	Jr. 4	404 ..	Banyule Airo
Black, I. S., Noorat, Ayrshire (3).										
Mount Noorat Alert 3rd ..	28719	28.7.36	13	5,679	4·87	276·53	230	Jr. 2	.. ..	Gowrie Park Scottish Patron
Mount Noorat Boronia 2nd	28720	12.7.36	5	4,368	4·58	199·91	230	Jr. 2	.. ..	Gowrie Park Scottish Patron
Mount Noorat Janice 4th ..	28722	2.7.36	11	5,838	4·10	239·26	230	Jr. 2	.. ..	Gowrie Park Scottish Patron
Box, Estate of Late Dr. J., Noojee, Jersey (3).										
†Toorongo Defender's Queen	36040	28.7.36	..	3,390	5·43	184·02	350	Mature	199, 184, 135	Toorongo Mercede's King
†Toorongo Margaret ..	C.R.	28.7.36	..	2,940	5·67	166·62	250	Sr. 2	.. ..	Toorongo Master Clement
Toorongo Twylish Clementine	C.R.	3.8.36	8	3,234	5·37	173·82	290	Sr. 3	86 ..	Toorongo Master Clement
Box, Estate of Late Dr. J., Whittlesea, Jersey (5).										
Edmonton Chevy ..	33210	23.9.36	15½	8,511	5·72	486·77	350	Mature	328, 464, 501, 492, 378	Big Chief of Glen Iris
Toorongo Juanita ..	50902	7.8.36	14½	6,560	5·12	335·83	310	Jr. 4	267, 287 ..	Kantara Don Juan
Toorongo Pet	42268	19.9.36	12½	7,472	5·76	430·43	350	Mature	284, 391, 365	Kantara Don Juan
Toorongo Princess Millicent	42270	29.7.36	13	7,215	5·52	393·72	310	Jr. 4	284, 370 ..	Toorongo Maori Chief
‡Toorongo Queen Elizabeth	55591	16.8.36	..	3,570	5·51	196·71	250	Sr. 2	165 ..	Kantara Don Juan
Brisbane, J. W., Hallora, Jersey (1).										
Ewelme Rosy Morn ..	52685	15.9.36	8½	4,562	6·06	276·27	250	Sr. 2	241 ..	Ewelme Brown Prince
Broad, A. A., Sutton Grange, Jersey (8).										
Grangelea Bell	40060	18.9.36	16	7,655	5·69	435·69	330	Sr. 4	302, 328, 411	Grangelea Daffodil's Aero
Grangelea Rhoda.. ..	53020	22.8.36	15½	6,213	5·15	319·66	230	Jr. 2	.. ..	Grangelea Cream Boy
Grangelea Rose 3rd ..	40066	16.9.36	14½	7,526	5·66	425·84	330	Sr. 4	346, 390, 433	Banyule Macon
Grangelea Rose 5th ..	48525	21.9.36	17	7,887	4·64	365·69	250	Sr. 2	309 ..	Banyule Macon
Grangelea Rosella 3rd ..	48528	4.8.36	17	6,993	5·97	417·60	270	Jr. 3	319 ..	Banyule Macon
Grangelea Rose Petal 2nd..	53022	5.9.36	14	4,979	6·45	321·25	230	Jr. 2	.. ..	Grangelea Cream Boy
Grangelea Velvet 2nd ..	53026	12.9.36	16	6,096	4·65	283·16	230	Jr. 2	.. ..	Banyule Macon
Loddon Vale Goldfinch 2nd	53831	18.7.36	9	5,304	5·49	291·39	330	Sr. 4	.. ..	Grangelea Robin
Calf, A. J., Werribee South, Jersey (4).										
Clydevale Carrilla ..	33266	22.8.36	23½	8,501	5·51	468·07	350	Mature	426, 423 ..	Staghorn Master's Defiance
Illillouette Bing Boy's Tangerine	48745	13.8.36	22	9,012	4·79	431·79	290	Sr. 3	313 ..	Clarendon Eyre Eminent's Bing Boy
Melrose Vanilla 30th ..	Vol. 24	17.7.36	19½	7,293	6·27	457·24	270	Jr. 3	.. ..	Werribee Lord Fancy
Springvale Countess 2nd ..	46162	19.8.36	20½	8,700	5·38	467·89	310	Jr. 4	320, 346 ..	St. Alban's Thelma's King 2nd
Chadderton, J. E., Hamilton, Jersey (8).										
Glen Leigh Damsel ..	52821	9.8.36	11	5,150	5·80	293·95	230	Jr. 2	.. ..	Glen Leigh Bounty
Glen Leigh Daphne ..	48263	7.9.36	11½	5,946	5·64	335·28	230	Jr. 2	.. ..	Glen Leigh Bounty
Glen Leigh Destiny 2nd ..	43973	9.7.36	13	6,254	6·03	381·06	270	Jr. 3	354 ..	Glen Leigh Bounty
Glen Leigh Dolly 2nd ..	48266	6.9.36	11	5,535	5·31	293·78	230	Jr. 2	.. ..	Glen Leigh Bounty
Glen Leigh Dora 2nd ..	28532	27.7.36	16	9,011	5·50	495·47	350	Mature	356, 500, 490, 456, 378	Gadabout of Danton
Glen Leigh Doris 3rd ..	37039	23.9.36	11½	7,593	4·98	377·87	350	Mature	434, 493, 373	Strathkellar Topthorn
Glen Leigh Dream ..	37040	9.7.36	14	7,440	4·86	361·50	330	Sr. 4	231, 312, 375	Strathkellar Topthorn
Glen Leigh Duchess 4th ..	25791	22.8.36	15	8,997	5·68	511·32	350	Mature	266, 455, 477, 503, 427	Gadabout of Danton

‡ 210 days in test, (sold). * 210 days in test. † 240 days in test, (sold).

Standard Herd Records—*continued.*

Name of Cow.	Herd Book No.	Date of Calving.	Milk last day of Test. lb.	Milk lb.	Average Test.	Butter Fat. lb.	Standard required.	Class.	Previous Yields of Butter Fat.	Sire.
Chirnside, R. M., Whittlesea, Jersey (13).										
Ballara Starbright 6th ..	38783	19.7.36	32	13,338	4·85	646·46	330	Sr. 4	386, 566, 585	Brucevale Lord Fancy Madeira
Mornmoot Fancy Madeira 2nd	45255	9.7.36	19½	8,205	6·30	516·69	270	Jr. 3	395 ..	Werribee Prince Madeira
Mornmoot Fancy Starbright	45256	6.7.36	23	10,212	6·11	624·30	270	Jr. 3	396 ..	Werribee Prince Madeira
Mornmoot Northwood Madeira	33142	4.8.36	19½	11,162	5·76	642·63	350	Mature	381, 471, 605, 589	Werribee Prince Madeira
Mornmoot Northwood Madeira 2nd	37070	31.7.36	22½	10,553	5·26	554·70	330	Sr. 4	421, 404 ..	Werribee Prince Madeira
Mornmoot Northwood Madeira 4th	45267	26.7.36	22	9,966	6·05	603·44	270	Jr. 3	474 ..	Werribee Jupiter
Mornmoot Northwood Madeira 5th	49959	20.8.36	8	4,784	6·38	305·30	230	Jr. 2	.. ..	Werribee Prince Madeira
Mornmoot Princess Madeira 3rd	45269	12.7.36	35½	12,272	5·87	720·92	290	Sr. 3	551 ..	Staghorn Larkspur's Majestic
Mornmoot Princess Madeira 5th	49660	18.9.36	20½	8,504	6·71	570·62	250	Sr. 2	429 ..	Werribee Jupiter
Mornmoot Satisfaction ..	45270	15.7.36	23	9,794	5·29	518·54	270	Jr. 3	370 ..	Werribee Prince Madeira
Staghorn Royal Lotus ..	37072	16.7.36	22	10,460	5·50	574·98	330	Sr. 4	359, 547, 552	Staghorn Northlarks Masterpiece
Werribee Mimi	33118	3.9.36	27½	10,280	5·82	598·33	350	Mature	.. ..	Werribee Grandmaster
Werribee Princess Satisfaction	28543	20.7.36	32½	12,317	6·04	743·73	350	Mature	595, 587, 680, 712	Werribee Butter King
Chitty, C., Kongwak, Jersey (2).										
*Ewelme Northern Necklace	33153	10.9.36	..	5,850	6·24	364·80	350	Mature	381, 366, 372, 289, 542	Northern Master of Glen Iris
Ewelme Norma	39670	25.7.36	21½	6,860	5·12	351·46	350	Mature	345, 286, 331, 382	Northern Master of Glen Iris
Clarke, F. W., Toora, Jersey (8).										
Banyarra Trinket 3rd ..	42880	4.7.36	21½	8,699	4·70	408·62	330	Sr. 4	308, 364 ..	Banyule Ventilation
Hazelgrange Mistress ..	40188	26.7.36	26½	11,261	5·98	672·87	350	Mature	356, 465, 490	Master Clement of Glen Iris
Mer Vue Butter Queen ..	Vol 24	13.7.36	18½	8,447	5·18	437·59	290	Sr. 3	358 ..	Tooravale Silver King
Mer Vue Choice	37096	10.7.36	15	7,400	6·45	477·34	350	Mature	400, 498 ..	Wood Searchlight
Mer Vue Choice 2nd ..	45131	9.8.36	19½	7,503	6·84	513·47	350	Mature	309, 407 ..	Tooravale Silver King
Mer Vue Choice 3rd ..	54081	15.7.36	19	7,275	6·14	446·55	250	Sr. 2	348 ..	Woorayl Flashlight
Mer Vue Choice 4th ..	Vol. 24	14.7.36	17	6,384	6·33	403·80	250	Sr. 2	.. ..	Woorayl Flashlight
Mer Vue Joy	C.R.	16.7.36	26	7,818	6·77	521·52	250	Sr. 2	.. ..	Woorayl Flashlight
Colenso, L. W. R., Alvie, Jersey (1).										
Maxon Counts Alsyke ..	45056	24.9.36	13½	7,179	6·07	436·02	310	Jr. 4	276, 390 ..	Maxon Count Graceful
Coughlin, C., Catani, Jersey (4).										
Fairview Sweet May ..	34258	13.9.36	N.O.C.	4,619	4·80	221·77	350	Mature	419 ..	Burnside Royalist
Glady's Park Blue Bell ..	43934	15.7.36	11½	5,795	5·72	331·23	310	Jr. 4	287, 252 ..	Werribee Bluebell's Masterpiece
Glady's Park Lillian ..	48211	15.9.36	13½	6,884	5·72	393·76	310	Jr. 4	347 ..	Werribee Bluebell's Masterpiece
Glady's Park Starbright ..	Vol. 24	18.8.36	20½	8,703	5·10	443·75	290	Sr. 3	362 ..	Werribee Bluebell's Masterpiece
Coulthard, J. L., and Son, Whittlesea, Jersey (2).										
†Wompini Joybell ..	25610	22.8.36	..	6,859	5·23	358·48	350	Mature	265, 421, 423, 374	Werribee Masterman
Lauriston Masters Belle ..	40641	9.8.36	11	6,804	5·08	345·65	330	Sr. 4	196, 353 ..	Rathlyn Lily's Master
Creed, C. S., Werribee, Jersey (7).										
Crystal Brook Glow ..	47810	19.9.36	15½	8,377	5·67	475·12	270	Jr. 3	292 ..	Crystal Brook Noble
Grangelea Bell 2nd ..	48516	17.9.36	25½	7,000	5·34	373·51	250	Sr. 2	287 ..	Clarendon Eyre Eminent-Ruddigore 3rd
Grangelea Bunty 7th ..	53016	23.9.36	16½	6,918	5·17	357·75	230	Jr. 2	.. ..	Banyule Macon
Grangelea Golden 4th ..	53018	8.9.36	14½	4,673	5·15	240·54	230	Jr. 2	.. ..	Banyule Macon
Grangelea Rose Petal 3rd ..	53023	12.9.36	24	6,227	5·03	313·44	230	Jr. 2	.. ..	Clarendon Eyre Eminent-Ruddigore 3rd
Wattle Grove Jacqueline ..	46647	31.8.36	12	7,251	5·34	387·33	310	Jr. 4	322 ..	Fairview Chief
Wattle Grove Petunia ..	51145	4.9.36	19½	7,073	4·52	320·00	270	Jr. 3	230 ..	Fairview Chief
De La Rue, N. C., Weering, Jersey (3).										
Lucerne Vale Battle's Trixie 3rd	28645	20.9.36	18½	7,151	5·47	391·08	350	Mature	346, 417, 437, 470	Somerville Battle
Lucerne Vale Master's Choice	49245	17.9.36	8½	4,841	6·02	291·49	250	Sr. 2	227 ..	Werribee Fancy Masterpiece
Lucerne Vale Silver Queen 3rd	Vol. 24	14.7.36	11	4,188	5·99	251·03	230	Jr. 2	.. ..	Lucerne Vale Noble's Master
Department of Agriculture, Burnley, Jersey (2).										
Victoria Flame	51025	20.7.36	12½	4,268	6·47	276·30	230	Jr. 2	.. ..	Melrose Lord Essex
Victoria Flirt	33272	7.8.36	11	8,516	6·02	512·63	350	Mature	359, 390, 484, 485	Victoria Jack Tar

* 180 days in test (herd sold.) † 240 days in test (withdrawn sick.)

STANDARD HERD RECORDS—*continued.*

Name of Cow.	Herd Book No.	Date of Calving.	Milk last day of Test. lb.	Milk. lb.	Average Test.	Butter Fat. lb.	Standard required.	Class.	Previous Yields of Butter Fat.	Sire.
Department of Agriculture, Werribee, Friesian (5).										
Victoria Chorus Girl ..	3759	22.9.36	44½	17,624	3·70	651·78	350	Mature	407, 510, 457	Dominion Oakdale
*Victoria Contralto ..	5106	3.7.36	..	9,255	3·29	304·65	290	Sr. 3	262 ..	Victoria Joyous Mercedes
Victoria Dancing Girl ..	Vol. 14	3.8.36	20½	7,913	4·03	318·51	250	Sr. 2	.. ..	Victoria Joyous Mercedes
Victoria Domino Patch ..	3255	20.9.36	33½	13,847	3·22	446·51	350	Mature	382, 372, 408, 441, 466, 424	Victoria Patch
Victoria Gaiety	4287	15.8.36	15	11,094	3·84	426·52	330	Sr. 4	370, 358 ..	Victoria Topnote
Department of Agriculture, Werribee, Red Poll (9).										
Victoria Bellalae	2304A	1.9.36	14	7,855	4·28	336·23	350	Mature	252, 284, 352, 447, 391	Vice Regal
Victoria Gratis	Vol. 8	4.8.36	13	5,288	4·85	256·73	230	Jr. 2	.. ..	Victoria John Bull
Victoria Harmony ..	Vol. 8	19.7.36	17½	5,759	4·57	263·31	270	Jr. 3	.. ..	Dominion Bright Belgian
Victoria Kosher	3914A	29.7.36	13	8,481	3·72	315·61	330	Sr. 4	196, 286 ..	Dominion Bright Belgian
Victoria Maid Marion ..	Vol. 8	21.9.36	20	7,202	4·39	316·37	230	Jr. 2	.. ..	Woodburn Peter Pan
Victoria Pocket	3030A	20.7.36	22	8,623	3·63	313·25	350	Mature	318, 339 ..	Dominion Bright Belgian
Victoria Rosemarie ..	2760AA	4.9.36	8	6,768	3·91	264·58	350	Mature	294, 278 ..	Victoria Royal Ringer
†Victoria Royal Regal ..	3517AA	4.8.36	4	5,025	4·01	201·57	310	Jr. 4	271 ..	Victoria Royal Ringer
Victoria Vanity	Vol. 8	10.9.36	11	5,564	3·74	208·31	250	Sr. 2	.. ..	Dominion Bright Belgian
Desmond, J. J., Rochester, Jersey (4).										
Macroom Countess 2nd ..	Vol. 24	5.8.36	9	5,952	4·75	282·67	290	Sr. 3	221, 305 ..	Glenalvie Statesman
Macroom Edna 2nd ..	53909	4.8.36	21	7,607	5·15	391·95	310	Jr. 4	337, 375 ..	Glenalvie Statesman
Macroom Ellen 4th ..	53911	6.8.36	20	8,349	5·79	483·07	270	Jr. 3	378 ..	Macroom May Be
Macroom Lovebird 2nd ..	49325	21.8.36	12	6,636	5·67	376·48	290	Sr. 3	354, 371 ..	Glenalvie Statesman
Dobson, R. J. M., Ackeron, Jersey (3).										
‡Wattle Grove Beauty ..	42449	18.7.36	..	7,260	5·09	369·42	350	Mature	348, 370 ..	Wattle Grove Sydney
§Wattle Grove Design's Queen	46646	25.8.36	..	6,630	5·36	355·47	310	Jr. 4	414 ..	Design's Ruler (Imp.)
‡Wattle Grove Pearlis ..	46648	13.7.36	..	6,953	5·01	348·24	290	Sr. 3	252, 307 ..	Fairview Chief
Dookie Agricultural College, Dookie, Ayrshire (3).										
Dookie Adept	24813	4.9.36	11½	10,338	3·81	393·83	350	Mature	406, 425, 501	Longerenong Laurie
Dookie Honeysuckle ..	29363	25.9.36	15	6,257	4·42	276·25	230	Jr. 2	.. ..	Trezorland Indispensible
Dookie Sparkle	27121	25.9.36	27½	13,691	3·97	544·20	290	Sr. 3	405 ..	Dookie Emblem
Dwyer, G., Balwyn, Jersey (4).										
Karalee Linda 3rd ..	48943	2.9.36	11	4,863	6·61	321·52	310	Jr. 4	350, 332 ..	Karalee Volunteer 6th
Karalee Linda 4th ..	48944	1[illegible].7.36	9½	5,117	6·37	325·98	270	Jr. 3	334 ..	Karalee Volunteer 8th
Karalee Lola 3rd..	53478	17.8.36	14½	5,948	6·15	366·09	270	Jr. 3	355 ..	Karalee Volunteer 8th
Karalee Lotus	53479	26.8.36	11½	5,360	5·76	308·52	250	Sr. 2	240 ..	Jubilee Leadlight
Enders, N. H., Stanhope, Jersey (10).										
The Wattles Hazel 2nd ..	55512	18.8.36	15	5,430	5·45	295·79	230	Jr. 2	.. ..	Woodside Chrissy's Gamboge
The Wattles Joy 3rd ..	46418	23.8.36	22	10,119	5·19	524·76	290	Sr. 3	442, 567 ..	The Wattles Biplane
The Wattles Joy 7th ..	55514	24.9.36	18	7,535	4·47	336·79	230	Jr. 2	.. ..	Woodside Chrissy's Gamboge
The Wattles Molcen 2nd ..	55516	25.8.36	18	5,537	5·21	288·33	230	Jr. 2	.. ..	Woodside Chrissy's Gamboge
The Wattles Petal ..	55522	9.8.36	18½	7,443	5·87	436·84	230	Jr. 2	.. ..	Banyule Supine
The Wattles Princess 4th ..	50857	13.9.36	16	7,797	5·75	448·35	250	Sr. 2	403 ..	The Wattles Biplane
*The Wattles Seville 4th ..	50861	24.9.36	..	5,385	6·14	330·53	250	Sr. 2	288 ..	The Wattles Biplane
The Wattles Seville 5th ..	55524	15.7.36	12	5,544	5·29	293·09	230	Jr. 2	.. ..	Banyule Supine
The Wattles Silvermine 2nd	55525	25.7.36	15½	6,302	5·92	372·90	230	Jr. 2	.. ..	Woodside Chrissy's Gamboge
The Wattles Duchess 5th ..	46416	7.9.36	16	8,637	6·21	536·75	310	Jr. 4	407, 553 ..	The Wattles Biplane
Fairchild and Clutterbuck, Tinamba, Jersey (1).										
Vaucluse Tinsel	55700	19.8.36	17	6,267	6·56	411·29	270	Jr. 3	289 ..	Vaucluse Concentration
Findlay, T. R., Leitchville, Jersey (9).										
Leven Brae A-do Daisy ..	53789	6.9.36	14	7,445	5·20	387·39	270	Jr. 3	334 ..	Werribee Mikado
Leven Brae A-do Edith ..	53790	8.8.36	22	9,183	4·74	435·56	250	Sr. 2	360 ..	Werribee Mikado
Leven Brae A-do Shirley ..	53794	14.8.36	12	7,148	5·22	373·15	250	Sr. 2	370 ..	Werribee Mikado
Leven Brae Choice ..	44888	5.8.36	21	8,171	5·17	422·37	330	Sr. 4	321, 445, 402	Werribee Gaypiece
Leven Brae Estelle ..	44889	17.9.36	17½	6,162	5·74	353·97	330	Sr. 4*	367, 370, 312	Werribee Gaypiece
Leven Brae Gay Duchess ..	37376	28.8.36	20	10,329	4·86	501·52	350	Mature	398, 455, 402, 581, 409	Werribee Gaypiece
Leven Brae Gay Duchess 2nd	49171	4.9.36	15	7,595	5·12	389·06	290	Sr. 3	348, 362 ..	Werribee Gaypiece
Leven Brae Joyce ..	37378	17.8.36	19	8,913	5·52	492·23	350	Mature	261, 358, 457, 599, 325	Werribee Gaypiece
View Banks Bonnie Peerless	C.R.	23.8.36	12	5,175	6·04	312·65	230	Jr. 2	.. ..	View Banks Defiance
Fixter, A., Boisdale, Guernsey (4).										
Avonview Dulcie ..	2537	29.6.36	20½	8,435	5·42	457·22	350	Mature	294, 317, 344, 348	Melbourne Sandboy 6th
Avonview Dulcie 3rd ..	3964	25.8.36	13½	6,645	5·56	369·76	250	Sr. 2	.. ..	Avonview Golden Lord
Fernlea Eve	2539	31.7.36	13½	8,567	4·95	423·85	350	Mature	276, 307, 275, 323	Yarraview Albert
Melbourne Butterfly ..	3627	27.7.36	11½	6,114	4·52	276·63	350	Mature	230, 244 ..	Melbourne Sandboy 6th

* 240 days in test (sold). † 240 days in test. ‡ 240 days in test (herd sold). § 210 days in test (herd sold).

STANDARD HERD RECORDS—*continued.*

Name of Cow.	Herd Book No.	Date of Calving.	Milk last day of Test. lb.	Milk lb.	Average Test.	Butter Fat lb.	Standard required.	Class.	Previous Yields of Butter Fat.	Sire.
Foster Bros, Boisdale, Jersey (8).										
Boisdale Birdie	51839	14.7.36	9	4,182	5·33	223·02	230	Jr. 2	.. ..	Boisdale Bruin 3rd
Boisdale Brunette 3rd ..	38942	9.9.36	4	7,119	5·49	390·85	350	Mature	254, 307, 379	Gladiator of Springhurst
Boisdale Countess 3rd ..	51841	24.7.36	7½	4,273	5·25	224·21	230	Jr. 2	.. ..	Boisdale Dazzler
Boisdale Dolly	47289	13.8.36	9½	5,066	5·96	301·97	290	Sr. 3	247 ..	Gladiator of Springhurst
Boisdale Fairy	43050	24.8.36	4	4,982	6·60	328·58	330	Sr. 4	204, 246 ..	Gladiator of Springhurst
Boisdale Fairy 2nd ..	51843	21.8.36	5	5,215	5·98	311·64	230	Jr. 2	.. ..	Gladiator of Springhurst
Hazeldale Ginger Princess..	40175	4.8.36	13	5,984	4·93	294·77	350	Mature	276, 255 ..	Dinkum of Banyule
Studleigh Harebell 21st ..	..	18.9.36	4	4,512	5.57	251.11	290	Sr. 3	.. ..	Bellefaire Blonde's Blondex.
Fraser, G. A., Addington, Ayrshire (7).										
Bonnie Doon Beth ..	28134	16.8.36	32	10,130	4·46	451·51	230	Jr. 2	.. ..	Glengowrie Masterpiece
Bonnie Doon Ester ..	28135	12.9.36	10½	5,748	4·37	251·32	230	Jr. 2	.. ..	Glengowrie Masterpiece
Bonnie Doon Honey ..	26972	5.9.36	24	8,774	4·30	377·54	270	Jr. 3	.. ..	Glengowrie Masterpiece
Bonnie Doon Midge ..	29148	12.9.36	14	5,642	3·74	211·01	230	Jr. 2	.. ..	Glengowrie Masterpiece
Glengowrie Beth	14764	6.9.36	18½	8,472	3·80	321·54	350	Mature	191 ..	Liberty of Lady Bank
Glengowrie Elma.. ..	23872	15.9.36	10	7,115	4·53	322·43	350	Mature	243, 248, 184, 350, 360	Glengowrie Baronet
Glengowrie Elva	26224	3.9.36	6½	7,596	4·08	309·71	350	Mature	278, 237 ..	Glengowrie Bold Baron
Gay, R. G., and Son, North Devon, Jersey (7).										
Elm Grove Dairymaid 2nd	43735	14.9.36	10	7,250	5·65	409·50	350	Mature	275, 346, 362	Warenda Ragtime Dominant
Elm Grove Dawn ..	52626	15.8.36	14½	6,302	5·51	347·46	270	Jr. 3	304 ..	Gold Star of Melrose
Elm Grove Jessie Fowler 2nd	37415	22.8.36	21	8,856	4·94	437·55	350	Mature	348, 342, 466	Gold Star of Melrose
Elm Grove Linda 2nd ..	52629	6.9.36	12	6,153	5·36	329·54	270	Jr. 3	282 ..	Gold Star of Melrose
Elm Grove Linda 3rd ..	52630	19.8.36	12½	6,249	4·94	308·75	250	Sr. 2	250 ..	Elm Grove Buttercup's Monarch
Elm Grove Milkmaid ..	34022	15.8.36	16	6,821	6·22	424·28	350	Mature	281, 342, 375, 443, 392	Royal Lad of Elm Grove
Myrtle Point Songstress ..	45341	17.9.36	21½	10,635	5·08	540·02	330	Sr. 4	458, 498 ..	Werribee Master King
Goddard, J. H., Jumbunna, Ayrshire (5).										
Donside Thistledown 2nd ..	23662	10.9.36	16½	11,439	4·27	488·22	350	Mature	401, 529 ..	Olive Dale Chum
Inverurie Duchess ..	27414	23.9.36	4	8,273	4·28	353·74	310	Jr. 4	401, 399 ..	Oakbank Radio
Inverurie Heather ..	27416	6.7.36	16	8,931	4·70	419·84	230	Jr. 2	.. ..	Oakbank Radio
Inverurie Maggie ..	27417	22.7.36	8½	8,249	4·54	374·76	310	Jr. 4	366 ..	Oakbank Radio
Inverurie Realm	27420	15.7.36	12	7,422	3·85	285·80	290	Sr. 3	272 ..	Oakbank Radio
Gregg, V., Whittlesea, Jersey (3).										
Stoneycroft Blossom 2nd ..	C.R.	27.7.36	15	7,013	5·31	272·05	310	Jr. 4	283, 346 ..	Kantara Don Juan
Stoneycroft Miss Catherine	37437	8.7.36	18	7,872	4·04	318·02	350	Mature	268, 349, 369	Kantara Don Juan
Stoneycroft Una 2nd ..	55292	24.8.36	18	5,837	6·90	402·99	350	Mature	411, 432 ..	Toorongo Mace
Handbury, J. E., and Son, No. 1, Toora, Jersey (17).										
Tooravale Lassie 3rd ..	25905	22.7.36	18	8,268	5·34	441·50	350	Mature	243, 331, 488, 482, 490, 382	Welkin of Melrose
Tooravale Lassie 11th ..	46476	18.9.36	18½	6,704	6·57	446·70	330	Sr. 4	218, 396 ..	Tooravale Gold Speck
Tooravale Lassie 12th ..	50891	9.7.36	20½	7,488	5·61	420·36	290	Sr. 3	360, 298 ..	Kings Vale Monica 14ths Son
Tooravale Lassie 14th ..	55578	3.8.36	15½	6,587	6·20	408·22	250	Sr. 2	298 ..	Tooravale Gold Speck
Tooravale Lassie 17th ..	55580	18.8.36	19	7,209	5·87	423·24	250	Sr. 2	318 ..	Kings Vale Monica 14ths Son
Tooravale Lassie 19th ..	Vol. 24	20.8.36	16	5,873	5·08	298·12	230	Jr. 2	.. ..	Kings Vale Monica 14ths Son
Tooravale Lassie Fowler 14th	50893	3.8.36	18½	7,061	6·24	440·54	290	Sr. 3	311 ..	Kings Vale Monica 14ths Son
Tooravale May 7th ..	Vol. 24	20.9.36	12	5,976	5·00	298·54	230	Jr. 2	.. ..	Tooravale Monica's Son
Tooravale Milkmaid 14th ..	50896	20.8.36	22½	8,624	5·25	453·05	290	Sr. 3	410, 302 ..	Tooravale Monica's Son
Tooravale Milkmaid 21st ..	Vol. 24	20.9.36	15	6,129	5·88	360·25	230	Jr. 2	.. ..	Tooravale Monica's Son
Tooravale Princess 7th ..	34056	6.7.36	20	7,889	5·52	435·61	350	Mature	285, 430, 597, 470	Tooravale Gold Speck
Tooravale Princess 9th ..	46479	22.7.36	24½	9,590	6·13	587·45	350	Mature	351, 627, 497	Tooravale Gold Speck
Tooravale Princess 12th ..	55585	20.7.36	18	6,458	5·95	384·00	270	Jr. 3	280 ..	Tooravale Monica's Son
Tooravale Princess 14th ..	55586	22.7.36	19	7,022	5·59	392·28	250	Sr. 2	.. ..	Tooravale Gold Speck
Tooravale Princess 15th ..	55587	26.8.36	13	4,614	6·38	294·23	250	Sr. 2	228 ..	Kings Vale Monica 14ths Son
Tooravale Princess 19th ..	Vol. 24	26.8.36	10½	5,169	5·77	298·14	230	Jr. 2	.. ..	Kings Vale Monica 14ths Son
Tooravale Starleigh 7th ..	50898	20.8.36	18½	8,010	5·99	479·84	350	Mature	233, 324, 461, 398	Tooravale Gold Speck
Handbury, J. E., and Son, No. 2, Toora, Jersey (9).										
Tooravale Lassie Fowler 8th	42254	21.8.36	13	6,210	5·26	326·48	350	Mature	286, 377, 435, 326	Tooravale Golden Mac
Tooravale Lassie Fowler 10th	42255	21.8.36	12	5,919	5·51	325·86	350	Mature	225, 298, 315, 280	Kingsvale Monica 14ths Son
*Tooravale Lassie Fowler 12th	42256	28.6.36	4	5,835	6·12	357·21	350	Mature	235, 220, 394	Tooravale Gold Speck
Tooravale Maids Princess 4th	Vol. 24	19.9.36	7	3,746	5·64	211·16	230	Jr. 2	.. ..	Tooravale Gold Speck
Tooravale (Milkmaid 6th ..	34053	29.8.36	11	5,679	6·10	346·51	350	Mature	279, 344, 498, 422	Tooravale Gold Speck

* 240 days in test.

Standard Herd Records—*continued.*

Name of Cow.	Herd Book No.	Date of Calving.	Milk last day of Test. lb.	Milk. lb.	Average Test.	Butter Fat. lb.	Standard required.	Class.	Previous Yields of Butter Fat.	Sire.
Handbury, J. E., and Son, No. 2, Toora—*continued.*										
Tooravale Milkmaid 15th ..	50897	10.9.36	4	4,850	6·47	313·99	270	Jr. 3	217 ..	Tooravale Monica's Son
Tooravale Milkmaid 19th ..	Vol. 24	22.8.36	11	2,767	6·31	174·67	230	Jr. 2	.. ..	Tooravale Gold Speck
*Tooravale Starleigh 3rd ..	25909	30.7.36	4	4,005	5·52	220·88	350	Mature	261, 357, 328, 311, 327, 361	Welkin of Melrose
Tooravale Starleigh 9th ..	50899	11.8.36	13½	4,989	5·83	291·07	310	Jr. 4	380, 279 ..	Tooravale Gold Speck
Handley, S. C., Dandenong, Jersey (2).										
Barrowby Queen's Betty ..	47134	25.7.36	15	7,816	5·05	394·75	270	Jr. 3	328 ..	Grangelea Progress
Barrowby Rose Fancy ..	Vol. 24	16.7.36	22	6,591	5·82	383·33	230	Jr. 2	316 ..	Wompini Twilight
Harvey, T., Boisdale, Jersey (3).										
Jerseyholm Empress 29th ..	40376	16.7.36	14	6,179	5·60	345·73	330	Sr. 4	283, 288 ..	Werribee Master's Fox
Jerseyholm Empress 45th ..	Vol. 24	25.9.36	11	7,091	4·84	343·18	230	Jr. 2	.. ..	Jerseyholm Master's Fox 6th
Jerseyholm Kirsty 30th ..	Vol. 24	1.8.36	13½	5,397	5·30	286·31	230	Jr. 2	.. ..	Jerseyholm Master's Expert 7th
Hayward, Dr. A. R., Hastings, Jersey. (7.)										
Gladys Park Goldmine ..	39784	11.7.36	4½	4,605	5·16	237·68	330	Sr. 4	234, 301, 273	Werribee Bluebells Masterpiece
Tiny 3rd of Beverly ..	21097	16.9.36	11½	6,608	4·99	329·51	350	Mature	282, 434, 262, 467, 453, 501, 387, 449, 355	Roscila's Lad of King Vale
Unandarra Jonquil 3rd ..	55675	16.9.36	8	4,641	6·25	290·28	250	Sr. 2	223 ..	Wompini Irish Lad
Windrest Chevy	42529	9.7.36	7½	5,534	6·09	336·75	310	Jr. 4	251, 359, 289	Edmonton Rarius
Windrest Chevy's Charm ..	Vol. 24	14.9.36	6½	4,026	6·31	253·91	230	Jr. 2	.. ..	Glen Iris Montrose Duke
Windrest Island Gold ..	Vol. 24	14.8.36	8½	4,296	4·88	209·48	230	Jr. 2	.. ..	Glen Iris Montrose Duke
Windrest Rose Marie ..	55878	21.8.36	13	5,448	5·61	305·80	250	Sr. 2	231 ..	Clarendon Eyre Eminents Achievement
Henderson, W., Grasmere, Ayrshire (4).										
Carracoorte Buttercup 5th	29206	14.9.36	N.O.C.	4,260	5·01	214·66	230	Jr. 2	.. ..	Grandview Bernie
Carracoorte Filpail 22nd ..	29207	13.9.36	N.O.C.	4,398	4·78	210·23	230	Jr. 2	.. ..	Grandview Bernie
Carracoorte Iris 22nd ..	25905	13.9.36	12	7,154	4·50	321·80	350	Mature	228, 273 ..	Carracoorte Maiden's Laddie
Carracoorte Viola 22nd ..	24712	21.7.36	5½	5,903	5·03	296·94	350	Mature	251, 304, 224	Carracoorte Pilot
Hercus, T. B., Hayanmi, Jersey (9).										
Mologa Belle 2nd ..	Vol. 24	3.7.36	9	4,616	5·25	242·28	250	Sr. 2	.. ..	Belgonia Hinkler
Mologa Blossom	Vol. 24	29.6.36	11	5,690	5·06	287·87	230	Jr. 2	.. ..	Belgonia Hinkler
Mologa Bonnie	54179	1.7.36	16	6,789	6·06	411·57	290	Sr. 3	355 ..	Belgonia Hinkler
Mologa Cherry Plum ..	Vol. 24	30.6.36	9	4,367	5·90	257·44	230	Jr. 2	.. ..	Belgonia Hinkler
Mologa Pansy	49589	8.7.36	20	8,991	5·01	450·68	310	Jr. 4	344, 401 ..	Belgonia Hinkler
Mologa Poppy	54182	27.6.36	10	5,565	6·10	339·66	230	Jr. 2	.. ..	Belgonia Hinkler
Mologa Tulip	49590	9.7.36	12	6,198	5·80	359·76	310	Jr. 4	336, 379 ..	Belgonia Hinkler
Mologa Viola	Vol. 24	20.7.36	8	5,447	5·63	306·42	230	Jr. 2	.. ..	Belgonia Hinkler
Mologa Violet	49591	20.7.36	15	9,191	4·74	436·05	330	Sr. 4	349, 387, 427	Eurobin Biplane
Hore, E., Horefield, Jersey (8).										
†Ballara Lassie 3rd ..	42861	26.8.36	22	8,115	5·84	473·76	330	Sr. 4	442, 487 ..	Brucevale Lord Fancy Madeira
Leven Brae Gay Countess ..	40698	3.9.36	25	8,900	4·60	409·53	350	Mature	247, 342, 441, 531, 408, 438	Werribee Gaypiece
Milvue Golden Duchess ..	Vol. 24	1.8.36	18	7,106	4·62	328·49	230	Jr. 2	.. ..	Glen Iris Lord Viola 2nd
Milvue Rosebud	Vol. 24	11.8.36	18	5,036	5·37	270·47	230	Jr. 2	.. ..	Milvue Christmas Melody
Milvue Twylish Bettwys ..	Vol. 24	30.6.36	16	6,641	5·53	367·39	230	Jr. 2	.. ..	Milvue Christmas Melody
Tavistock Larkspur ..	55437	24.7.36	21	7,718	6·49	500·79	250	Sr. 2	433 ..	Werribee Ranger
Tavistock Valarie ..	55444	26.8.36	17	7,469	5·90	440·89	250	Sr. 2	324 ..	Werribee Ranger
Troed-Yr-Rhiw Eastern Queen	Vol. 24	7.8.36	16	6,163	5·77	355·32	230	Jr. 2	.. ..	Clarendon Eyre Oxford Dreamer
Huffer, J. A., Gormandale, Jersey (19).										
Glen Valley Coral Sand 2nd	34030	26.8.36	16	8,073	5·28	426·26	350	Mature	325, 389, 377, 458, 409	Waverley's Count of Glen Valley
Glen Valley Coral Sand 3rd	44110	11.8.36	13½	8,009	5·17	414·02	290	Sr. 3	285, 348 ..	Brucevale Wyandotte's King
Glen Valley Dawn ..	Vol. 24	16.9.36	9½	7,218	5·50	396·98	270	Jr. 3	.. ..	Brucevale Wyandotte's King
Glen Valley Handsome Girl 3rd	44112	27.6.36	16	6,483	5·99	388·21	330	Sr. 4	245, 305 ..	Melrose Ensign
Glen Valley Handsome Girl 5th	Vol. 24	25.7.36	14	5,030	5·94	299·02	230	Jr. 2	.. ..	Glen Valley Mercedes Masterpiece
Glen Valley Irish Rose ..	44113	19.9.36	14	7,399	5·24	387·74	290	Sr. 3	258, 330 ..	Glen Valley Handsome Boy
Glen Valley Joyce ..	48439	24.9.36	5½	6,219	6·32	392·92	270	Jr. 3	305 ..	Brucevale Wyandotte's King
Glen Valley Marigold ..	44115	5.9.36	8½	6,906	6·10	421·16	310	Jr. 4	323, 381 ..	Brucevale Wyandotte's King
Glen Valley Mercedes 2nd ..	Vol. 24	20.9.36	12	5,882	6·18	363·46	270	Jr. 3	.. ..	Brucevale Wyandotte's King
Glen Valley Mercedes 4th ..	Vol. 24	19.9.36	11	5,018	5·18	259·77	230	Jr. 2	.. ..	Brucevale Wyandotte's King
Glen Valley Primrose ..	Vol. 24	8.9.36	8½	5,297	5·22	276·75	230	Jr. 2	.. ..	Glen Valley Mercedes Masterpiece
Glen Valley Royal Rose 2nd	37612	8.8.36	13	7,418	5·49	407·12	350	Mature	279, 273, 252	Waverley Count of Glen Valley

* 210 days in test. † 240 days in test.

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STANDARD HERD RECORDS—*continued.*

Name of Cow.	Herd Book No.	Date of Calving.	Milk last day of Test.	Milk. lb.	Average Test.	Butter Fat. lb.	Standard required.	Class.	Previous Yields of Butter Fat.	Sire.
Huffer, J. A., Gormandale—*continued.*										
Glen Valley Sand Daisy 3rd	48441	5.9.36	9	6,575	5·41	355·50	270	Jr. 3	283 ..	Glen Valley Royal Jester
Glen Valley Sand Daisy 4th	48442	28.8.36	14	6,215	5·24	325·66	250	Sr. 2	251 ..	Brucevale Wyandotte's King
Glen Valley Sand Girl ..	24404	24.7.36	5	7,785	5·01	389·91	350	Mature	307, 342, 406, 421, 399, 375, 386	Glen Valley Waverley's Count
Glen Valley Silvershine ..	52946	11.7.36	17	6,904	6·08	419·82	330	Sr. 4	282, 386, 397	Melrose Ensign
Glen Valley Stumpy ..	48443	16.7.36	11½	5,649	6·35	358·51	250	Sr. 2	280 ..	Brucevale Wyandotte's King
Glen Valley Verbena 2nds Fairy	31094	7.8.36	13	7,293	5·94	433·02	350	Mature	375, 404, 325, 404	Waverley's Count of Glen Valley
Glen Valley Waverley Lass 2nd	24405	11.8.36	13½	6,816	5·99	408·29	350	Mature	353, 394, 456, 456, 374, 408	Top Note of Glen Valley
Hurrey, W. H., Koonwarra, Jersey (5).										
Kooreena Carrie 4th ..	49033	17.9.36	16	8,070	6·77	546·01	290	Sr. 3	430 ..	Kooreena Carrie 3rds Halo
Kooreena Minerva 2nd ..	25952	24.9.36	21	7,821	6·76	528·58	350	Mature	289, 482, 491	Columbine's Defiance of Linga Longa
Kooreena Minerva 4th ..	34104	19.8.36	15	8,211	4·72	387·36	350	Mature	.. ..	Kooreena Carrie 3rds Delegate
Kooreena Mourier Queen 11th	Vol. 24	3.8.36	N.O.C.	5,640	6·20	349·47	230	Jr. 2	.. ..	Kooreena Carrie 3rds Halo
Kooreena Yo Yo.. ..	44759	16.9.36	12½	8,219	5·34	438·49	290	Sr. 3	360, 390 ..	Columbine's Defiance of Linga Longa
Hutchison, H. McD., Yan Yean, Jersey (1).										
Eulomo Duchess 3rd ..	Vol. 24	30.8.36	6½	5,135	6·32	335·84	230	Jr. 2	.. ..	Werribee Lord Fancy
King, H. W., Warragul, Jersey (8).										
Karoola Beauty	28996	19.8.36	17½	7,498	5·58	418·04	350	Mature	323, 379, 400, 387, 434, 388	Glen Valley Fancy Rose's Lad
Karoola Dianthus ..	37697	21.8.36	14½	7,754	5·18	401·87	350	Mature	266, 368, 359	Glenallan Mariposa
Karoola Doris	37698	2.7.36	13	5,712	5·42	309·56	330	Sr. 4	249, 316, 271	Glenallan Mariposa
Karoola Honey Bee 3rd ..	23242	2.7.36	18½	7,907	4·87	385·39	350	Mature	358, 464, 470, 481, 453, 440	Pretty King of Koorawatha
Karoola Honey Bee 5th ..	40500	22.7.36	14½	6,062	5·18	313·79	350	Mature	253, 302, 336, 357	Glenallan Mariposa
Karoola Jean	Vol. 24	28.7.36	17	7,419	5·34	396·33	270	Jr. 3	298 ..	Glenallan Mariposa
Karoola Merle	37700	6.8.36	19	7,182	4·32	310·28	330	Sr. 4	224, 285, 265	Glenallan Mariposa
Karoola Sweet Nell ..	33441	22.7.36	15½	8,426	5·02	423·31	350	Mature	289, 378, 307, 446, 342	Cream Lad of Mayland
Lane, K. D., Merino, Jersey (5).										
Dalray Fairy Queen ..	26007	22.7.36	18	7,107	4·86	345·51	350	Mature	365, 409 ..	Glenlock Sultan
Dalray Gold Spec ..	52450	18.9.36	12	2,758	6·50	179·16	230	Jr. 2	.. ..	Dalray Masterman
Dalray Larkspur	29000	25.8.36	17½	7,034	5·72	402·62	350	Mature	278 ..	Sutton Lea Director
Dalray Larkspur's Surprise 2nd	39494	25.7.36	16	5,936	6·21	368·84	310	Jr. 4	.. ..	Dalray Twylish Prince
Dalray Queen's Centenary..	52453	25.8.36	13	3,944	6·16	243·06	230	Jr. 2	.. ..	Kingsvale Brunette 23rds Lad
Leask, G. C., Garfield, Ayrshire (3).										
Coonawarra Silver Bell ..	19786	23.7.36	22	8,688	4·23	367·85	350	Mature	199, 259, 273	Patrician of Glen Gowrie
Wayside Ibex	25554	25.7.36	18	7,830	4·29	335·74	350	Mature	195 ..	Gowrie Park Great Scot
Tinkle of Wayside ..	14908	1.8.36	8	8,585	4·47	383·34	350	Mature	282, 333, 298, 290, 295	Patrician of Glen Gowrie
Longerenong Agricultural College, Dooen, Ayrshire (5).										
Longerenong Blackbird 3rd	28676	8.9.36	9	4,284	3·93	168·41	230	Jr. 2	.. ..	Dookie Punch
Longerenong Cedar Wattle 3rd	27517	15.9.36	8½	4,826	4·15	200·14	270	Jr. 3	.. ..	Longerenong Noble
Longerenong Cootamundra Wattle	26552	24.9.36	4	4,919	4·42	217·23	310	Jr. 4	244, 229 ..	Longerenong Baron
Longerenong Laurustine 2nd	26560	10.9.36	11½	6,423	4·76	305·73	310	Jr. 4	221 ..	Longerenong Noble
Longerenong Silver Wattle 2nd	26566	2.9.36	7	6,113	4·30	262·64	290	Sr. 3	191 ..	Longerenong Noble
Lyon, C. G., Heidelberg, Jersey (9).										
Banyarra Attractions Madeira 2nd	47115	16.9.36	10	6,516	6·42	418·15	270	Jr. 3	296 ..	Retford King Bracken
Banyule Frill	42882	6.7.36	14	6,447	5·07	327·04	270	Jr. 3	289 ..	Banyule Amplifier
Banyule Hawthorn 19th ..	47118	16.7.36	16	6,420	5·99	384·76	250	Sr. 2	.. ..	Banyule Pitman
Banyule Silvermine 63rd ..	28844	19.8.36	18	8,589	5·50	472·36	350	Mature	343, 329, 469, 429	Air Lord of Banyule
Banyule Silvermine 94th ..	47128	10.9.36	10	5,100	6·11	311·61	230	Jr. 2	.. ..	Banyule Supreme
Banyule Tiddlewinks 10th..	37785	11.8.36	15	7,257	5·32	385·89	350	Mature	286, 501 ..	Banyule Lord Silvair
Banyule Tiddlewinks 18th..	47129	13.8.36	9½	5,429	5·60	303·80	230	Jr. 2	.. ..	Oxford Beau's Pretty Oxford (Imp.)
Kantara Jessamine ..	29382	15.7.36	13	7,512	4·22	317·11	350	Mature	297 ..	Ku Ku Fashion Plate
Kantara Wildflower ..	24582	14.9.36	14	8,750	5·04	440·66	350	Mature	377, 487 ..	Ku Ku Fashion Plate

Standard Herd Records—*continued.*

Name of Cow.	Herd Book No.	Date of Calving.	Milk last day of Test. lb.	Milk. lb.	Average Test.	Butter Fat. lb.	Standard required.	Class.	Previous Yields of Butter Fat.	Sire.
Lyon, W. H., Sole, Jersey (8).										
Avon Betty	51568	25.8.36	14½	6,218	5·55	344·93	250	Sr. 2	205	Ruby's Beau (Imp.)
Avon Boronia	Vol. 24	7.9.36	9	5,177	5·75	297·77	230	Jr. 2	..	Ruby's Beau (Imp.)
Avon Butterfly	51570	7.9.36	10	5,529	6·50	359·39	250	Sr. 2	278	Ruby's Beau (Imp.)
Avon Lassie Fowler 14th	51574	14.9.36	10	6,596	5·66	373·22	270	Jr. 3	..	Studleigh Lord Madeira
Avon Little Nell 8th	47073	2.9.36	10	4,769	6·14	292·68	310	Jr. 4	331	Avon Lassie Fowler's Count
Avon Lotus Lily	Vol. 24	12.9.36	8	4,508	5·75	259·04	230	Jr. 2	..	Ruby's Beau (Imp.)
Avon Mignonette	C.R.	17.8.36	14½	5,327	5·42	288·83	230	Jr. 2	..	Ruby's Beau (Imp.)
Avon Princess Ruby	Vol. 24	21.8.36	8½	4,733	6·10	288·91	230	Jr. 2	..	Ruby's Beau (Imp.)
Macauley, C. W., Rochester, Jersey (2).										
Taranah Chime	55424	23.9.36	14	8,748	5·09	445·04	330	Sr. 4	303, 402, 483	Duke of Invermay
Taranah Fair Lady	42116	19.7.36	6½	6,958	5·18	360·71	350	Mature	286, 344, 400	Taranah Submarine
McCosh, S. J., Wandin North, Jersey (1).										
Carney Dell Brilliant 2nd	39187	26.7.36	29	9,885	5·54	547·26	350	Mature	309, 421, 442	Carney Dell Masterpiece
McDougall, J., Byaduk, Jersey (8).										
Park View Cornflower	50082	19.9.36	10½	5,853	5·27	308·49	270	Jr. 3	304	Grangelea Royal
Park View Daphne 2nd	45647	1.8.36	10½	6,263	5·66	354·78	290	Sr. 3	320	Grangelea Royal
Park View Fancy	41513	24.9.36	14½	7,104	4·83	342·95	350	Mature	281, 374, 380	Grangelea Royal
Park View Floss	50084	1.9.36	7	5,900	5·33	314·60	250	Sr. 2	302	Staghorn Fancy's Observer 2nd
Park View Golden May	54676	13.9.36	9½	4,604	4·97	228·71	230	Jr. 2	..	Staghorn Fancy's Observer 2nd
*Park View Lona	34206	13.9.36	..	4,800	5·22	250·68	350	Mature	315, 299, 303, 381	Cream Lad of Fairview
Park View Lona 3rd	54677	6.9.36	9	5,232	5·47	286·23	250	Sr. 2	..	Staghorn Fancy's Observer 2nd
Park View Mayflower 4th	54678	1.8.36	9½	5,508	5·63	310·02	230	Jr. 2	..	Staghorn Fancy's Observer 2nd
McNabb, G. A., and Son, Irrewillipe East, Jersey (24).										
Avalon Noble's Pansy 3rd	36833	1.8.36	13½	7,044	6·13	431·96	350	Mature	308, 294, 421, 333	Noble of Avalon
Boorene Silver Light	25542	13.8.36	16	7,560	6·35	480·18	350	Mature	377, 478, 493, 470, 519, 368	Lady Grey's Silvermine 2nd of Somerset
Maxon Bright Clara	54013	22.8.36	14	5,510	5·72	314·94	230	Jr. 2	..	Maxon Starbright Prince 5th
Maxon Bright Favourite	45055	19.9.36	16	7,526	5·68	427·79	310	Jr. 4	337, 342	Maxon Starbright Prince 4th
Maxon Bright Silver	54014	17.9.36	13	5,333	6·18	329·54	230	Jr. 2	..	Maxon Starbright Prince 5th
Maxon Chieftain's Alsyke	49422	20.9.36	10	4,209	6·71	282·49	270	Jr. 3	188	Maxon Chieftain
Maxon Chieftain's Alsyke 2nd	54015	1.9.36	14	5,270	6·21	327·29	230	Jr. 2	..	Maxon Chieftain
Maxon Count's Daisy 2nd	54017	21.9.36	12½	4,385	5·58	244·79	230	Jr. 2	..	Maxon Count's Graceful
Maxon Count's Favourite 2nd	49423	20.9.36	12	4,575	6·12	279·86	250	Sr. 2	227	Maxon Count's Graceful
Maxon Count's Lady 4th	54019	6.9.36	15	6,305	5·48	345·61	230	Jr. 2	..	Maxon Count's Graceful
Maxon Count's Lodestone 2nd	54020	24.8.36	16½	5,855	5·80	339·47	230	Jr. 2	..	Maxon Count's Graceful
Maxon Easter Daisy 3rd	54022	2.9.36	12	4,598	5·06	232·66	230	Jr. 2	..	Avalon Noble 8th
Maxon Graceful Bouvardia	49426	19.9.36	13	4,791	6·85	328·04	250	Sr. 2	252	Maxon Count's Graceful
Maxon Graceful Duchess	40935	18.8.36	20	6,823	5·95	405·82	310	Jr. 4	237, 338	Maxon Count's Graceful
Maxon Graceful Marie	49428	24.9.36	10	4,881	5·67	291·58	250	Sr. 2	200	Maxon Count's Graceful
Maxon Mercedes Favourite	45064	18.9.36	11	4,320	7·13	308·12	290	Sr. 3	304, 271	Maxon Mercedes Chief 4th
Maxon Mercedes Ranunculus	45067	17.8.36	15	5,587	6·38	356·41	290	Sr. 3	332, 283	Maxon Mercedes Chief 4th
Maxon Noble's Alsyke	34221	24.8.36	21	9,212	5·51	507·70	350	Mature	268, 421, 412, 459, 401	Avalon Noble 8th
Maxon Noble's Daisy 2nd	54025	21.8.36	13	5,183	5·47	283·53	230	Jr. 2	..	Avalon Noble 8th
Maxon Noble's Goldfinch	45069	23.9.36	23½	8,634	5·54	478·19	310	Jr. 4	331, 372	Avalon Noble 8th
Maxon Noble's Goldfinch 2nd	54026	25.8.36	12	4,167	6·61	275·42	230	Jr. 2	..	Avalon Noble 8th
Maxon Shasta Daisy 3rd	54028	26.8.36	18	5,754	4·63	266·53	230	Jr. 2	..	Maxon Count's Graceful
Maxon Sweet Estella	54029	12.9.36	12	4,970	5·73	284·56	230	Jr. 2	..	Maxon Count's Graceful
Maxon Tiare	40939	30.8.36	14	7,141	5·83	416·43	330	Sr. 4	240, 267, 337	Maxon Mercedes Chief 4th
Maher, R. H., Tongala, Jersey (3).										
Rosemont Lassie Fowler 4th	37877	12.9.36	4½	5,433	5·14	279·23	350	Mature	280, 232, 380, 319	Rosella 2nd's Noble of Rosemont
Rosemont Lassie Fowler 10th	50460	22.8.36	7	5,471	5·47	299·23	330	Sr. 4	270, 329	Rosemont Laddie Fowler 3rd
Rosemont Primrose 4th	41866	12.9.36	10½	6,834	5·27	360·41	350	Mature	365, 333	Rosemont Laddie Fowler 3rd
Maloney, P. J., Tongala, Jersey (14).										
Belgonia Design's Eileen	51698	16.8.36	9½	6,167	6·44	396·93	230	Jr. 2	..	Design's Ruler (Imp.)
Belgonia Design's Lady	42918	6.9.36	12	8,976	4·65	417·46	310	Jr. 4	427, 445	Design's Ruler (Imp.)
Belgonia Design's Marie 2nd	51700	23.7.36	23	7,736	5·07	392·39	230	Jr. 2	..	Design's Ruler (Imp.)
Belgonia Design's Noella	42697	13.9.36	21½	9,439	5·08	479·34	350	Mature	370, 462, 470	Design's Ruler (Imp.)
Belgonia Duke's Buttercup	47151	20.9.36	21	9,180	5·92	543·28	270	Jr. 3	405	Duke of the Lake (Imp.)
Belgonia Eileen 2nd	42921	14.8.36	27	10,979	5·65	620·29	310	Jr. 4	427, 561	Duke of the Lake (Imp.)
Belgonia Eileen	38827	10.8.36	20½	8,150	6·36	518·20	330	Sr. 4	390, 433, 472	Werribee Planet
Belgonia Eileen 4th	51703	9.8.36	14	5,387	6·05	326·09	230	Jr 2	..	Design's Ruler (Imp.)

* 210 days in test (sold).

STANDARD HERD RECORDS—*continued.*

Name of Cow.	Herd Book No.	Date of Calving.	Milk last day of Test. lb.	Milk. lb.	Average Test.	Butter Fat. lb.	Standard required.	Class.	Previous Yields of Butter Fat.	Sire.
Maloney, P. J., Tongala—*continued.*										
Belgonia Eileen 6th ..	51704	10.9.36	18	6,527	5·81	379·39	230	Jr. 2	.. ..	Design's Ruler (Imp.)
Belgonia Junette ..	38829	23.9.36	15½	8,511	5·94	505·19	330	Sr. 4	347, 434 ..	Retford Glider
Belgonia Marie 4th ..	24491	31.7.36	12½	10,797	5·13	554·12	350	Mature	357, 512, 470, 571, 543, 508, 457, 585	Aerial of Banyule
Belgonia Peggy 9th ..	37898	23.9.36	16	10,046	5·38	540·22	350	Mature	354, 417, 450, 482	Aveley Rex
Belgonia Peggy 11th ..	42023	17.8.36	10½	9,198	5·40	496·67	290	Sr. 3	372, 436 ..	Duke of the Lake (Imp.)
Leven Brae Empire ..	34001	23.9.36	21½	10,130	5·18	524·32	350	Mature	357, 397, 437, 485	Werribee Gaypiece
Masters, S. H., Murraydale, Jersey (7).										
Rutland Bright Stockings	41918	29.6.36	22	9,095	5·19	471·75	350	Mature	275, 356, 437, 433	St. Alban's Fuchsia's Choice
Rutland Brunette 3rd ..	41919	8.8.36	13½	8,742	4·44	388·36	350	Mature	374, 448, 474, 456	St. Alban's Fuchsia's Choice
Rutland Brunette 6th ..	50524	27.7.36	20½	7,263	5·26	382·31	290	Sr. 3	292, 405 ..	Rutland Rover
Rutland Brunette 10th ..	Vol. 24	10.9.36	20	6,506	5·15	334·76	230	Jr. 2	.. ..	Kings Vale Lauder
Rutland Brunette 11th ..	Vol. 24	20.7.36	17	5,391	4·92	265·27	230	Jr. 2	.. ..	Kings Vale Lauder
Rutland Brunette 12th ..	Vol. 24	14.8.36	12	6,264	5·04	315·52	230	Jr. 2	.. ..	Kings Vale Lauder
Rutland Brunette 13th ..	Vol. 24	13.9.36	16	5,852	5·21	304·67	230	Jr. 2	.. ..	Kings Vale Lauder
Meaklim Bros., Mooroopna, Dairy Shorthorn (1).										
Drumnell Nellie 3rd ..	D.S.H.B.	4.7.36	20	12,054	3·76	453·48	270	Jr. 3	328 ..	Willow Park Reformer
Moore, J., and Co., Yarram, Jersey (14).										
Antimony's Trixie of Belle Vue	15569	9.9.36	14½	8,004	4·54	363·25	350	Mature	479, 460, 463, 415, 472, 351	Columbine's Antimony
Rydon Belle	41920	1.8.36	14½	7,022	5·05	354·59	350	Mature	347, 400 ..	Melrose Migrant
Rydon Duchess	41922	28.8.36	15	7,067	5·46	385·62	330	Sr. 4	329, 428 ..	Melrose Migrant
Tooloonook Beauty 4th ..	33540	23.9.36	4½	5,898	4·50	265·35	350	Mature	148, 249, 281, 307, 264, 250	Heroic of Somerville
Tooloonook Boltonia 2nd ..	33541	2.8.36	13	6,039	5·04	304·59	350	Mature	259, 336, 271, 273, 307	Heroic of Somerville
Tooloonook Heather 2nd ..	50883	16.7.36	10	8,445	4·68	395·62	350	Mature	228, 291, 334	Heroic of Somerville
Tooloonook Lilac Bloom ..	33542	27.7.36	11	6,276	5·19	325·52	350	Mature	263, 342, 355, 265, 287, 307	Heroic of Somerville
Tooloonook Lotus 3rd ..	46467	2.8.36	11½	6,338	4·14	262·66	330	Sr. 4	207, 270 ..	Heroic of Somerville
Tooloonook Molly 5th ..	C.R.	16.9.36	10½	6,255	4·93	308·40	310	Jr. 4	173 ..	Tooloonook Belle's Hero
Tooloonook Peach ..	33545	14.7.36	24½	9,530	4·53	431·96	350	Mature	282, 358, 338, 384, 411	Tooloonook Carob's Hero
Tooloonook Plumbago 2nd ..	25568	23.9.36	4½	8,346	4·83	402·97	350	Mature	323, 427, 463, 349, 393, 375, 329	Heroic of Somerville
Tooloonook Trixie 6th ..	33549	1.9.36	N.O.C.	5,877	5·20	306·79	350	Mature	208, 404, 281, 174, 326	Heroic of Somerville
Tooloonook Trixie 11th ..	42250	11.7.36	10	7,385	4·42	326·78	350	Mature	254, 286 ..	Heroic of Somerville
Tooloonook Trixie 15th ..	C.R.	25.8.36	13	6,071	4·62	280·83	290	Sr. 3	262, 294 ..	Tooloonook Carob's Hero
Murdoch, J. T., and Son, Lismore, Jersey (3).										
Murona Countess 3rd ..	49735	11.8.36	15½	5,697	5·44	309·84	250	Sr. 2	.. ..	Banyule Airpoise
Murona Petal	37615	14.8.36	11½	5,550	5·37	297·80	350	Mature	.. ..	Banyule Airpoise
Murona Petal 4th ..	49736	20.8.36	8½	4,676	5·21	243·75	270	Jr. 3	.. ..	Orphanage Lady's Nobleman
Nancarrow Bros., Kerang, Jersey (7).										
Belgonia Design's Buttercup	42917	4.9.36	9	5,922	5·73	339·39	310	Jr. 4	351, 380 ..	Design's Ruler (Imp.)
Bellaire Molly 8th ..	37975	19.8.36	22	9,681	5·70	552·18	350	Mature	422, 430, 479, 539	Werribee Fancy Clementine's King
Pine Ridge Hawthorn ..	Vol. 24	18.7.36	16	5,849	5·24	306·75	230	Jr. 2	.. ..	Woodside Reprieve's Volunteer
Pine Ridge Princess 2nd ..	Vol. 24	7.8.36	10	3,977	5·98	237·73	230	Jr. 2	.. ..	Duke of the Lake (Imp.)
Pine Ridge Silvermine 2nd	Vol. 24	13.8.36	15	6,053	5·21	315·11	230	Jr. 2	.. ..	Duke of the Lake (Imp.)
Pine Ridge Starette 2nd ..	Vol. 24	13.8.36	15	5,659	5·93	335·85	230	Jr. 2	.. ..	Duke of the Lake (Imp.)
Pine Ridge Wattle 2nd ..	Vol. 24	17.8.36	18	5,847	5·28	308·69	230	Jr. 2	.. ..	Duke of the Lake (Imp.)
Nicholas, Estate of Late A. M., Sherbrook, Jersey (23).										
Brampton Standard Free Girl (Imp.)	56049	2.9.36	11	5,328	6·01	320·16	230	Jr. 2	.. ..	Brampton Sporting Standard
Brucevale Fancy Starbright 3rd	28544	1.8.36	18	7,674	5·86	449·95	350	Mature	314, 408, 510, 562, 484	Masterpiece of Brucevale
Fillpails Tally (Imp.) ..	56051	31.7.36	20½	9,135	4·39	400·94	330	Sr. 4	.. ..	Fillpails Wonderful Volunteer
Jubilee Eucalyptus ..	33795	31.7.36	15	5,670	5·35	303·38	350	Mature	303, 382, 391, 436, 481	Jubilee Whatlight
Jubilee Euphoebia ..	44527	14.8.36	9	4,659	5·96	277·82	290	Sr. 3	294, 354 ..	Jubilee Wattlelight
Jubilee Maple	38343	10.8.36	18½	7,832	4·61	361·39	350	Mature	323, 281, 329, 390	Jubilee Whatlight

Standard Herd Records—*continued.*

Name of Cow.	Herd Book No.	Date of Calving.	Milk last day of Test. lb.	Milk. lb.	Average Test.	Butter Fat. lb.	Standard required.	Class.	Previous Yields of Butter Fat.	Sire.
Nicholas Estate of Late A. M., Sherbrook—*continued.*										
Jubilee Myrtle	33665	16.8.36	17	7,338	5·06	371·52	350	Mature	343, 354, 400, 316, 421	Jubilee Whatlight
Jubilee Ranunculus	26186	2.8.36	16½	9,882	3·95	390·19	350	Mature	404, 449, 423, 424, 321	Jubilee Fanlight
Jubilee Ricious	38344	7.8.36	14	7,572	5·13	388·13	350	Mature	264, 327, 352, 357	Jubilee Wheatenlight
Jubilee Rowan	38128	31.8.36	9	6,437	5·01	322·34	350	Mature	308, 405, 372, 386	Jubilee Whatlight
Jubilee Weigelia	40438	25.8.36	13½	8,199	4·88	400·09	350	Mature	223, 368, 374	Jubilee Asterlight
Kantara Attraction	40486	15.7.36	21½	7,761	6·22	482·83	330	Sr. 4	350, 410, 506	Ku Ku Fashion Plate
Selsey Brampton Wyandotte	50565	4.7.36	6½	4,733	6·00	284·20	250	Sr. 2	383 ..	Brampton Great Boy (Imp.)
Selsey Design's Wyandotte 2nd	55206	17.8.36	13½	5,291	6·61	349·56	230	Jr. 2	.. ..	Selsey Design's Master
Selsey Lady Viola	41946	23.9.36	15	6,870	5·71	392·48	350	Mature	341, 389, 367	Jubilee Asterlight
Selsey Ricious	50570	27.7.36	11	5,493	5·75	315·84	250	Sr. 2	300 ..	Brampton Great Boy (Imp.)
Selsey Rose	41947	7.9.36	22	8,959	5·62	503·93	350	Mature	381, 492, 421	Jubilee Asterlight
Selsey Rose 3rd	55210	3.8.36	12½	5,437	5·22	284·02	230	Jr. 2	.. ..	Brampton Great Boy (Imp.
Selsey Roseleaf 2nd	55211	22.9.36	14½	5,937	6·18	366·64	230	Jr. 2	.. ..	Brampton Great Boy (Imp.)
Selsey Starbright	50573	9.8.36	11	4,773	6·62	316·11	250	Sr. 2	375 ..	Brampton Great Boy (Imp.)
*Selsey Waterlily	50574	13.8.36	4	2,760	6·85	189·06	250	Sr. 2	298 ..	Brampton Great Boy (Imp.)
Selsey Waterlily 2nd	55213	9.8.36	13	5,772	6·03	348·32	230	Jr. 2	.. ..	Brampton Great Boy (Imp.)
Soeurette Franchise (Imp.)	56057	2.8.36	18½	8,654	4·98	431·33	350	Mature	.. ..	Soeurette's Fern Oxford
Noble, T. M., and Sons, Maffra, Jersey (2).										
Finchley Master's Canary	52727	1.7.36	16	7,292	6·54	476·64	250	Sr. 2	388 ..	Finchley Masterman
Finchley Nasturtium 3rd	Vol. 24	4.8.36	14	6,177	6·90	426·28	200	Sr. 3	.. ..	Finchley Lord Burnham
Norman, J. G., Pennyroyal, Jersey (12).										
Banaview Lilac Domino	47105	28.8.36	8	4,968	5·91	293·67	290	Sr. 3	314 ..	Clarendon Eyre Eminenta Bing Boy
Banaview Lilac Domino 2nd	51635	29.6.36	19	7,553	5·91	446·65	250	Sr. 2	296 ..	Banyarra Novar
Banaview Lilac Domino 4th	Vol. 24	2.8.36	16	5,318	5·60	297·71	230	Jr. 2	.. ..	Banaview Silvermine's Sultan
Banaview Springflower	47106	2.7.36	24½	7,857	4·16	326·71	290	Sr. 3	335 ..	Kantara Starbright's Sultan
Clarendon Eyre Lilac Domino 2nd	39253	2.8.36	18	8,778	5·97	524·27	350	Mature	449, 469, 442	Clarendon Eyre Happy Husband
Clarendon Eyre Pinafore	29626	18.8.36	21½	8,555	5·87	502·42	350	Mature	360, 442, 439, 483, 546	Masterpiece (Imp.)
Banaview Jonquil	47104	6.7.36	25	8,340	4·64	389·09	290	Sr. 3	335 ..	Kantara Starbright's Sultan
Kantara Jonquil	40488	4.7.36	25	9,138	5·04	460·34	350	Mature	412, 491 ..	Glen Iris Valiant Count
Kantara Silvermine	40491	5.7.36	30	10,443	5·53	577·66	350	Mature	505, 576 ..	Ku Ku Fashion Plate
Kantara Springflower	26203	3.7.36	29	10,487	4·80	503·19	350	Mature	405, 441, 544, 599	Ku Ku Fashion Plate
Selsey Clementine 2nd	55205	2.8.36	15	6,693	6·50	435·11	270	Jr. 3	.. ..	Brampton Great Boy (Imp.)
Selsey Design	50567	6.9.36	21	10,386	4·58	475·35	290	Sr. 3	390 ..	Design's Ruler (Imp.)
O'Neill, J., Echuca Jersey, (4).										
Ballara Model 6th	33837	16.9.36	12	7,178	5·85	419·56	350	Mature	380, 446, 507, 440	Brucevale Lord Fancy Madeira
Fourshells Yvette	38349	2.9.36	11	7,023	5·32	373·95	350	Mature	490, 436, 405	Belgonia Propeller
Strathbow Heather Belle	29326	9.9.36	13	7,479	6·67	498·61	350	Mature	362, 508, 546, 469, 399	Studleigh Noble
Ullina Heather Belle 2nd	Vol. 24	15.9.36	11	5,946	5·58	332·05	230	Jr. 2	.. ..	Kyora Dream's Gadget 2nd
Overend, Mrs. A. C., Sale, Jersey (4).										
Bon Accord Belle	33576	24.8.36	11	7,284	5·65	411·32	350	Mature	293, 335, 288, 428, 428	Bon Accord David
Bon Accord Madam Pompadour	29284	23.9.36	14	6,579	5·21	342·47	350	Mature	227, 330, 373, 266, 400, 408	Bon Accord Torus
Bon Accord Madam Pompadour 4th	43700	14.8.36	11	5,888	5·41	318·49	270	Jr. 3	302 ..	Bon Accord John
†Bon Accord Beaming Gem	C.R.	14.6.36	4	1,305	5·99	78·15	230	Jr. 2	.. ..	Tavistock Mystic Prince
Parks, L. A., and Sons, Romsey, Guernsey (1).										
Melbourne Golden Gem	4501	14.7.36	9½	5,019	5·97	299·38	290	Sr. 3	264, 335 ..	Nundorah Climax
Pattison, F., Tongala, Ayrshire (13).										
Borinya Queenie	26978	19.8.36	9	9,084	3·81	346·20	310	Jr. 4	322, 318 ..	Oakbank Wireless
Willow Park Amy	23342	16.7.36	12	8,339	3·90	325·55	350	Mature	273, 332, 341, 343	Willow Park Prince
Willow Park Ella	16926	28.8.36	8	9,435	3·99	376·86	350	Mature	303, 310, 302, 362, 363, 288	Tonga Park James
Willow Park Elsie	26805	13.8.36	5	6,215	4·42	274·44	290	Sr. 3	301, 227 ..	Willow Park Prince
Willow Park Empress	26806	28.8.36	8	7,923	3·74	296·66	290	Sr. 3	250, 277 ..	Willow Park Prince
Willow Park Eva	C.R.	26.7.36	22	7,728	4·09	315·94	250	Sr. 2	.. ..	Fulham Beam
Willow Park Jean	25567	21.8.36	17½	8,816	3·66	322·46	330	Sr. 4	269, 300 ..	Willow Park Prince
Willow Park Lady	24457	30.8.36	17½	9,149	3·78	346·06	330	Sr. 4	290, 354 ..	Willow Park Prince

* 240 days in test. † 120 days in test.

STANDARD HERD RECORDS—*continued.*

Name of Cow.	Herd Book No.	Date of Calving.	Milk last day of Test. lb.	Milk. lb.	Average Test.	Butter Fat. lb.	Standard required.	Class.	Previous Yields of Butter Fat.	Sire.
Pattison, F., Tongala—*continued.*										
*Willow Park Lily ..	26807	28.8.36	4	7,575	4·17	315·60	310	Jr. 4	280, 296 ..	Willow Park Prince
Willow Park Pearl ..	22243	7.8.36	14½	7,827	4·47	350·18	350	Mature	260, 318, 305, 330, 352	Clansman of Glenholme
Willow Park Poppy ..	25568	28.7.36	19	8,970	4·14	371·52	330	Sr. 4	352, 407 ..	Willow Park Prince
Willow Park Princess ..	26809	19.8.36	13½	7,697	3·86	297·14	290	Sr. 3	270 ..	Willow Park Prince
Willow Park Rosina ..	26810	28.7.36	27	8,663	4·34	375·59	290	Sr. 3	278 ..	Fulham Beam
Payne, A. E. T., Lilydale, Guernsey (13).										
Clara's Fashion 8th (Imp.)..	Vol. 11	25.7.36	25	8,976	4·61	413·52	230	Jr. 2	.. ..	Camilla's Majestic 2nd of Maple Lodge
Marose of Kings Mills (Imp.)	Vol.11	5.9.36	15½	6,605	4·59	303·41	250	Sr. 2	.. ..	Majestic of Kings Mills
Pearl 2nd of Kings Mills (Imp.)	Vol. 11	19.9.36	15	6,931	5·25	364·00	230	Jr. 2	.. ..	Emblem of Kings Mills
Rose Gem of Maple Lodge (Imp.)	3933	1.7.36	35½	10,206	5·04	514·18	350	Mature	608 ..	Conqueror
Yarraview Clara	3935	19.9.36	26½	9,753	4·44	433·29	350	Mature	413 ..	Sunrise of Maple Lodge
Yarraview Dawn.. ..	3553	30.7.36	13½	8,058	5·13	413·45	350	Mature	350 ..	Carnilla's Majestic of Maple Lodge (Imp.)
Yarraview Delight ..	5167	20.7.36	20	8,078	4·95	399·69	290	Sr. 3	.. ..	Camilla's Majestic of Maple Lodge (Imp.)
Yarraview Ella	1168	22.9.36	14	8,739	4·79	418·30	310	Jr. 4	534 ..	Camilla's Majestic of Maple Lodge (Imp.)
Yarraview Isa	3900	7.9.36	15	7,785	5·21	405·58	310	Jr. 4	386 ..	Camilla's Majestic of Maple Lodge (Imp.)
Yarraview Julie	3560	25.8.36	17½	7,197	4·90	352·76	350	Mature	480 ..	Camilla's Majestic of Maple Lodge (Imp.)
Yarraview Meta	5176	23.9.36	13	7,376	5·20	383·48	270	Jr. 3	310 ..	Camilla's Majestic of Maple Lodge (Imp.)
Yarraview Ruby	5178	25.8.36	18½	7,863	4·81	378·39	230	Jr. 2	.. ..	Camilla's Majestic of Maple Lodge (Imp.)
Yarraview Songstress 2nd..	5179	1.8.36	20	8,111	5·41	438·48	270	Jr. 3	.. ..	Camilla's Majestic of Maple Lodge (Imp.)
Pearson, J., Nerrena East, Jersey (6).										
†Warrawee First Choice ..	Vol. 24	15.8.36	..	4,185	5·66	236·88	250	Sr. 2	271 ..	Banyule Tympani
Warrawee Heather Bell ..	Vol. 24	20.7.36	13	6,705	5·09	341·50	230	Jr. 2	.. ..	Warrawee Bell Boy
Warrawee Jean	Vol. 24	22.7.36	13½	4,568	4·18	190·81	270	Jr. 3	226 ..	Warrawee Trumpeter
Warrawee Joyce	Vol. 24	30.7.36	7½	3,744	5·86	219·41	230	Jr. 2	.. ..	Warrawee Bell Boy
Warrawee Melody ..	55792	24.7.36	15	6,198	5·09	315·74	270	Jr. 3	298 ..	Warrawee Trumpeter
Warrawee Peggy	46628	22.8.36	12	5,106	4·73	241·64	330	Sr. 4	287, 332, 340	Banyule Tympani
Phillips, J. H., Speewa, Jersey (1).										
Kantara Jessamine 2nd ..	40487	6.9.36	14	7,805	5·29	412·56	350	Mature	331, 363, 404, 422	Glen Iris Valiant Count
Powell, T. S., Mansfield, Jersey (4).										
Monterey Maid	49602	13.8.36	16	8,502	5·04	428·25	290	Sr. 3	.. ..	Mornmoot Starbright King
Monterey Melody's Mascot..	Vol. 24	2.7.36	18	7,832	5·36	419·65	230	Jr. 2	.. ..	Rosecliffe Mariposa's Master
Mornmoot Stella Princess ..	45272	9.8.36	17	7,967	5·37	427·53	290	Sr. 3	349 ..	Werribee Prince Madeira
Wompini Anna Carlovna ..	Vol. 24	26.8.36	19½	6,792	5·52	374·85	230	Jr. 2	.. ..	Werribee Butter King
Raleigh, Miss H. E., Pakenham Upper, Jersey (2).										
Goronga Farm Madeira's Modesty	Vol. 24	20.8.36	11	4,425	5·98	264·66	230	Jr. 2	.. ..	Werribee Prince Madeira
Goronga Farm Rosemarys Reputation	Vol. 24	11.9.36	12	4,933	6·32	312·00	230	Jr. 2	.. ..	Somerville Reputed King
Read, J. D., Springhurst, Jersey (9).										
Aconite of Springhurst ..	21598	24.8.36	20½	8,786	5·11	448·57	350	Mature	417, 373, 501, 588, 567, 492, 496	Othman of Springhurst
Springhurst Coronation Alsyke	46182	14.9.36	11	7,596	5·89	447·51	330	Sr. 4	323, 406 ..	Design's Ruler (Imp.)
Springhurst Coronation Brinjal	50624	14.7.36	20	7,205	5·36	386·48	230	Jr. 2	.. ..	Springhurst Design's Analyst
Springhurst Coronation Tomato	46184	11.8.36	14½	7,025	5·85	411·27	310	Jr. 4	.. ..	Design's Ruler (Imp.)
Springhurst Sybil Frangipani	50632	22.7.36	20	8,043	4·86	390·72	250	Sr. 2	367 ..	Bellefaire Seaborn Successor
Springhurst Sybil Lily ..	41993	10.9.36	19	9,407	5·77	542·47	350	Mature	432, 551, 509	Bellefaire Seaborn Successor
Springhurst Sybil Medick ..	41999	12.7.36	21½	9,011	6·41	577·31	350	Mature	356, 376, 524	Bellefaire Seaborn Successor
Springhurst Sybil Tulip ..	55281	30.7.36	15	5,462	6·02	328·67	230	Jr. 2	.. ..	Springhurst Golden Gamboge
Springhurst Tomato 3rd ..	38110	18.9.36	22½	8,889	6·09	541·73	350	Mature	450, 537, 565, 540	Starbright's Prince of Glen Iris
Rentsch, A., Tabor, Illawarra Shorthorn (1).										
Wattle Bank Betty ..	18476	12.7.36	13	6,294	4·42	278·42	250	Sr. 2	.. ..	Lemon Grove Empress Kitchener

* 250 days in test. † 240 days in test, (sold).

Standard Herd Records—*continued.*

Name of Cow.	Herd Book No.	Date of Calving.	Milk last day of Test. lb.	Milk lb.	Average Test.	Butter Fat. lb.	Standard required.	Class.	Previous Yields of Butter Fat.	Sire.
Richardson, W. S., Bacchus Marsh, Jersey (5).										
Rosyth Banksia Bonnie ..	41900	3.9.36	13	5,984	5·63	336·64	350	Mature	289, 268 ..	Aveley Antony
Sutton Lea Silvermine ..	46287	24.8.36	13	6,749	5·94	400·85	330	Sr. 4	257 ..	Banyule Petalon 2nd
Sutton Lea Tricia ..	46288	1.8.36	15½	6,587	4·77	313·99	310	Jr. 4	216 ..	Banyule Petalon 2nd
Sutton Lea Ueline ..	46289	1.8.36	17½	7,044	6·38	449·08	330	Sr. 4	269 ..	Sutton Lea Charnap
Sutton Lea Vanity ..	46290	20.7.36	13	5,493	6·24	342·80	330	Sr. 4	231, 245 ..	Banyule Petalon 2nd
Salesian College, Sunbury, Ayrshire (1).										
Rupertswood Rosalina ..	Vol. 29	28.6.36	17	6,731	4·11	276·56	250	Sr. 2	.. ..	Scotswood Bellboy
Salesian College, Sunbury, Friesian (3).										
Elgin Glen Ashlynn ..	4524	18.9.36	40	15,835	3·32	525·60	330	Sr. 4	354, 280 ..	Burnbank Majoe Dutchman
Enterprise Lady Griselda ..	4530	7.7.36	12½	7,327	4·26	312·34	270	Jr. 3	313 ..	Graindale Longbeach Hero
*Ingolston Milkmaid ..	4101	2.8.36	4	7,510	3·66	274·71	350	Mature	380, 285 ..	Greenvale Ideal Segis
Sebire, T., Wandin Yallock, Jersey (3).										
†Leven Brae A'do Rose ..	Vol. 24	15.8.36	4	3,743	6·27	234·74	230	Jr. 2	.. ..	Werribee Mikado
‡Leven Brae A'do Rosette ..	Vol. 24	18.8.36	4	2,850	6·34	180·63	230	Jr. 2	.. ..	Werribee Mikado
Wandin Cream Piece ..	46592	27.8.36	36	10,754	5·66	609·13	310	Jr. 4	266 ..	St. Alban's Lilac's Supervisor
Shearman, A., and W., Darnum, Jersey (4).										
Darnum Park Princess ..	C.R.	29.8.36	16½	5,540	5·63	311·77	230	Jr. 2	.. ..	Darnum Park Starbright's Masterpiece
Darnum Park Sweet Briar ..	C.R.	10.9.36	12	4,965	6·30	312·93	230	Jr. 2	.. ..	Darnum Park Starbright's Masterpiece
†Oak Park Sweet Lady ..	45498	12.8.36	4	5,520	5·72	315·54	330	Sr. 4	372, 370, 507	Brucevale Lord Fancy Attraction
Sleepy Valley Milkmaid ..	Vol. 24	3.8.36	18	6,866	5·67	389·01	310	Jr. 4	315, 470, 463	Holly Dell Twylish
Smith Bros, Mirbo North, Jersey (23).										
Sylvan Hill Alma Belle ..	42089	19.9.36	10½	6,548	5·38	352·27	350	Mature	279, 349, 400, 329	Somerville Heir Apparent
Sylvan Hill Beauty ..	38277	6.9.36	10	6,719	6·26	420·63	350	Mature	435, 375, 405, 359	Somerville Heir Apparent
Sylvan Hill Bouquet ..	Vol. 24	19.8.36	10½	3,360	7·84	263·54	230	Jr. 2	.. ..	Jerseyholm Handsome Boy 3rd
Sylvan Hill Bright Tissue ..	23445	3.9.36	13½	7,788	4·74	368·94	350	Mature	453, 392, 444, 323	Butterwinks 2nd of Jersey Hill
Sylvan Hill Brunette ..	Vol. 24	22.8.36	12½	4,343	5·14	223·07	230	Jr. 2	.. ..	Sylvan Hill Starlight's Pride
Sylvan Hill Charm ..	46300	14.9.36	9½	7,964	5·42	431·79	350	Mature	286, 426, 347	Somerville Heir Apparent
Sylvan Hill Charmaine ..	55378	26.8.36	10½	5,268	6·54	344·38	270	Jr. 3	232 ..	Jerseyholm Handsome Boy 3rd
Sylvan Hill Countess 2nd ..	55379	1.9.36	18½	7,664	5·42	415·02	270	Jr. 3	305 ..	Jerseyholm Handsome Boy 3rd
Sylvan Hill Daisy 2nd ..	26361	6.9.36	10½	6,291	5·26	331·16	350	Mature	366, 380, 377, 320	Merrylad of Sylvan Hill
Sylvan Hill Dream Girl ..	28279	8.9.36	13	6,311	4·28	269·91	350	Mature	332, 274, 316, 304	Sylvan Hill Starlight's Pride
Sylvan Hill Empire Queen ..	50737	7.8.36	19½	6,605	5·75	379·46	310	Jr. 4	311, 306 ..	Somerville Heir Apparent
Sylvan Hill Handsome Girl	33762	8.9.36	10½	7,224	6·23	450·39	350	Mature	419, 360, 429, 381	Jerseyholm Handsome Boy 3rd
Sylvan Hill Joyful ..	50738	4.8.36	13½	7,287	5·44	396·63	310	Jr. 4	345, 337 ..	Somerville Heir Apparent
Sylvan Hill Lady Alma ..	38282	8.8.36	18½	8,188	6·11	500·39	350	Mature	363, 364, 409, 380	Somerville Heir Apparent
Sylvan Hill Molly ..	42093	30.7.36	4	7,254	4·64	336·65	350	Mature	270, 277, 375, 276	Somerville Heir Apparent
Sylvan Hill Noble Lady ..	38283	27.8.36	8½	6,617	5·57	368·83	350	Mature	304, 304, 325, 305	Somerville Heir Apparent
Sylvan Hill Opal	Vol. 24	15.9.36	12	5,226	6·34	331·34	230	Jr. 2	.. ..	Jerseyholm Handsome Boy 3rd
Sylvan Hill Peeress ..	46302	1.9.36	15½	8,040	5·24	421·22	350	Mature	276, 371, 368	Sylvan Hill Starlight's Pride
§Sylvan Hill Primrose 2nd ..	55382	4.8.36	4	4,681	5·53	258·80	270	Jr. 3	212 ..	Jerseyholm Handsome Boy 3rd
Sylvan Hill Rock Lily ..	46304	23.9.36	11	6,191	6·36	393·65	350	Mature	264, 377, 351	Somerville Heir Apparent
Sylvan Hill Ruby ..	42094	30.7.36	16½	7,245	4·62	335·14	350	Mature	294, 336, 352, 301	Somerville Heir Apparent
Sylvan Hill Sparkle ..	46305	12.8.36	14	8,358	4·80	401·39	350	Mature	306, 389 ..	Somerville Heir Apparent
Sylvan Hill Thelma ..	46308	17.9.36	12½	6,849	4·84	331·81	330	Sr. 4	268, 371, 330	Somerville Heir Apparent
Stoney, W. B., Drouin West, Jersey (3).										
Edmonton Scarcity 2nd ..	47932	3.9.36	N.O.C.	5,060	5·97	302·33	350	Mature	310 ..	Rarius of Edmonton
‖Tarago Mystery ..	46339	12.9.36	4	4,830	6·35	306·60	350	Mature	251, 314, 318	Handsome Boy 12th of Jerseyholm
Tarago Wildflower ..	42114	1.9.36	N.O.C.	7,008	5·28	370·32	350	Mature	182, 289 ..	Glenesk Eminent's Lightnin 2nd
Taylor, C. G., Highton, Jersey (1).										
¶Thornbury Grange Elaine 3rd	Vol. 24	20.8.36	..	4,635	5·07	234·99	230	Jr. 2	.. ..	Somerville Dignity

* 250 days in test. † 210 days in test. ‖ 240 days in test. ‡ 180 days in test. ¶ 210 days in test (herd withdrawn). § 254 days in test.

Standard Herd Records—*continued.*

Name of Cow.	Herd Book No.	Date of Calving.	Milk last day of Test. lb.	Milk lb.	Average Test.	Butter Fat. lb.	Standard required.	Class.	Previous Yields of Butter Fat.	Sire
Thomas and Taylor, Hamilton, Ayrshire (7).										
Carracoorte Betsy 26th ..	28168	30.8.36	11	7,171	4·63	331·91	290	Sr. 3	307 ..	Carracoorte Panic
Carracoorte Lucy 13th ..	24702	28.8.36	16	9,776	3·93	383·71	350	Mature	383, 379 ..	Carracoorte Lochiel
Carracoorte Minnie 7th ..	24706	24.9.36	12	8,994	5·02	451·05	350	Mature	329, 404 ..	Carracoorte Lochiel
Carracoorte Viola 13th ..	19740	10.7.36	23	9,246	4·35	401·79	350	Mature	189, 293, 416, 423	Bluebell's Pride of Glencourt
Jennewar Pansy	28610	6.8.36	6½	3,789	4·61	174·84	250	Sr. 2	.. ..	Carracoorte Opperman
Jennewar Poppy	28611	17.7.36	13	4,583	4·97	227·88	250	Sr. 2	.. ..	Carracoorte Opperman
Jennewar Valda	28612	15.8.36	14	6,257	4·26	266·68	250	Sr. 2	210 ..	Carracoorte Opperman
Tomasetti, B. G., Drouin West, Ayrshire (6).										
Glencorren Enid	Vol. 29	7.8.36	12	4,533	5·02	227·76	230	Jr. 2	.. ..	Scotswood Michael 2nd
Glencorren Foam ..	21505	12.9.36	23	9,740	4·77	464·31	350	Mature	307, 444, 431, 481, 421	Glen Athol Brilliant
Glencorren Lilac	22832	1.7.36	21	9,071	4·40	399·57	350	Mature	393, 378, 488, 539	Scotswood Michael 2nd
Glencorren Violetta ..	20120	11.9.36	22	10,725	4·60	429·09	350	Mature	271, 317, 506, 472, 500, 469	Glen Athol Jimmie
Glencorren Virtue ..	Vol. 29	5.9.36	13	7,263	4·19	304·57	250	Sr. 2	212 ..	Gowrie Park Scottish Emblem
Glen Athol Graceful ..	20074	2.9.36	22	9,722	4·20	408·57	350	Mature	433, 358 ..	Glen Athol Jimmie
Trewin, J. V., Nathalia, Jersey (6).										
Belgonia Blossom 7th ..	29112	29.7.36	22	9,138	5·30	484·28	350	Mature	474 ..	Aerial of Banyule
Weir View Golden Duchess	51161	28.7.36	25	8,072	4·83	398·06	270	Jr. 3	385 ..	Duke of the Lake (Imp.)
Weir View Golden Duchess 2nd	51162	18.8.36	15½	6,626	5·24	346·93	230	Jr. 2	.. ..	Weir View Laddie 2nd
Weir View Greetings ..	42459	11.8.36	17½	8,172	5·31	434·24	310	Jr. 4	323 ..	Belgonia Milk Lad
Weir View Wattle Blossom ..	38428	25.8.36	18½	7,395	5·35	395·87	350	Mature	360 ..	Belgonia Milk Lad
Weir View Wattle Blossom 2nd	55821	16.9.36	15½	6,041	5·05	304·83	230	Jr. 2	.. ..	Weir View Laddie 2nd
Vagg, E. J., Leongatha, Jersey (13).										
Bonnay Amanda's Doris ..	51865	10.8.36	20	7,436	4·89	363·77	250	Sr. 2	307 ..	Jerseyinn Edith's Masterpiece
Bonnay Lady Amanda ..	38975	29.8.36	20	7,172	5·13	367·98	350	Mature	266, 261, 267, 339	Welbourne Handsome Boy
Bonnay Love's Bluebell ..	51866	23.9.36	12	6,920	4·85	335·39	270	Jr. 3	286 ..	Jerseyinn Edith's Masterpiece
Bonnay Midget's Winnie ..	38976	12.7.36	N.O.C.	7,038	5·80	408·30	350	Mature	339, 336, 360	Welbourne Handsome Boy
Bonnay Mona's Jessie ..	Vol. 24	30.7.36	18½	6,102	5·43	331·64	230	Jr. 2	.. ..	Jerseyinn Edith's Masterpiece
Bonnay Mystery Maid 3rd	33861	27.6.36	17	7,302	5·05	369·01	350	Mature	297, 357, 412, 424, 367	Welbourne Handsome Boy
Bonnay Mystery Maid 4th ..	38977	25.7.36	20	8,327	4·86	404·63	350	Mature	280, 300, 295, 369	Bonnay Handsome Boy
Bonnay Phyllis	38978	1.9.36	21	8,420	5·33	448·71	350	Mature	301, 357, 389, 364	Welbourne Handsome Boy
Bonnay Ruby's Bell 2nd ..	Vol. 24	30.7.36	15	5,642	5·56	313·81	230	Jr. 2	.. ..	Jerseyinn Edith's Masterpiece
Bonnay Silver's Fancy ..	Vol. 24	26.7.36	19	5,814	4·99	290·12	230	Jr. 2	.. ..	Jerseyinn Edith's Masterpiece
Lady of Queen's Vale ..	19963	5.8.36	16	7,472	5·80	433·05	350	Mature	431, 451, 452, 488, 462, 352, 317	Daphne's Peer of Queen's Vale
Rydon May Queen 2nd ..	55151	17.8.36	22	8,435	5·36	452·27	250	Sr. 2	379 ..	Melrose Migrant
Rosyth Lady Tulip 3rd ..	38451	26.8.36	15	8,432	5·98	504·01	350	Mature	288, 387, 415, 446, 444	Lord 2nd of Brucevale
Van Brummelen, J. K., Notting Hill, Friesian (1).										
Bolero Sylvia's Rose Mary ..	4390	2.7.36	40	14,699	3·48	511·92	330	Sr. 4	395, 455 ..	St. Alban's Queen's Korndyke 2nd
Vaughan Bros., Girgarre, Jersey (6).										
Lynroy Fancy	38459	20.9.36	15	10,748	5·18	556·25	350	Mature	445, 475, 335, 506, 452	Sherborne Wyandotte King
Lynroy Fancy 4th ..	C.R.	20.9.36	17	7,046	5·42	381·78	230	Jr. 2	.. ..	Werribee Laverock
Lynroy Jasmine	Vol. 24	11.8.36	19½	7,262	5·85	424·84	310	Jr. 4	367 ..	Werribee Laverock
Lynroy Nancy 3rd ..	26269	3.8.36	21	8,633	5·21	449·41	350	Mature	426, 450, 458, 410, 443, 468	Choice 2nd of Tarnpirr
Lynroy Natty	C.R.	27.8.36	19½	8,072	5·85	472·55	270	Jr. 3*	.. ..	Werribee Laverock
Lynroy Sprite	Vol. 24	18.9.36	14	6,042	5·83	352·10	230	Jr. 2	.. ..	Werribee Laverock
Wade, W. J., Stratford, Jersey (4).										
Inverbroom Silver Muriel 3rd	53274	19.8.36	11½	3,915	6·11	239·05	230	Jr. 2	.. ..	Economist of Aveley
*Inverbroom Empress 4th ..	53272	7.9.36	4	3,750	5·42	203·25	230	Jr. 2	.. ..	Economist of Aveley
Inverbroom Silver Bunty ..	53273	23.8.36	10	6,378	4·46	284·33	230	Jr. 2	.. ..	Economist of Aveley
Latrobe Countess 3rd ..	28969	2.9.36	19	9,106	4·56	415·13	350	Mature	256, 283 ..	Latrobe Molly's Airman

* 210 days in test.

STANDARD HERD RECORDS—*continued.*

Name of Cow.	Herd Book No.	Date of Calving.	Milk last day of Test. lb.	Milk lb.	Average Test.	Butter Fat. lb.	Standard required.	Class.	Previous Yields of Butter Fat.	Sire.
Walker, C. S., Swan Hill, Friesian (3).										
Warwick Leonora Walker ..	C.R.	21.9.36	24	8,667	2·99	258·92	230	Jr. 2	.. ..	Hengest Matador Walker
Warwick Lizzie Oakwood ..	C.R.	10.7.36	33½	10,166	2·98	302·42	230	Jr. 2	.. ..	Hengest Matador Walker
Warwick Maggie Walker ..	C.R.	21.7.36	20	7,529	3·61	272·06	250	Sr. 2	.. ..	Hengest Segis Lizzie
Walker, C. S., Swan Hill, Jersey (3).										
Warwick Augustus Marie ..	38468	8.9.36	22½	8,288	4·80	397·79	350	Mature	339, 433, 348, 379, 337	Chevrolet of Banyule
Warwick Augustus Marie 3rd	C.R.	24.8.36	14	5,297	5·12	271·21	270	Jr. 3	.. ..	Glen Iris Golden Lad
Warwick Cream Stockings ..	Vol. 24	12.9.36	15	5,583	5·29	295·45	230	Jr. 2	.. ..	Starlight of Bellaire
Wallace A., Kennington, Jersey (7).										
*Fairview Carmen ..	21504	2.8.36	..	4,260	4·58	195·24	350	Mature	.. ..	Hawthorn Audrey Twylish of Banyule
†Fairview Carmen 2nd ..	34246	7.8.36	..	4,740	4·74	224·82	350	Mature	.. ..	Burnside Royalist
*Fairview Starfinch ..	29146	5.8.36	..	2,843	5·27	149·88	350	Mature	.. ..	Burnside Royalist
*Grovelea Bonnie Lass ..	48575	19.9.36	..	5,040	4·19	210·99	290	Sr. 3	278 ..	Thornbury Bonnie Boy
*Grovelea Busy Bee ..	44229	2.8.36	..	5,475	4·37	239·37	330	Sr. 4	283 ..	Thornbury Bonnie Boy
‡Grovelea Morocco's Fairy..	53069	5.9.36	..	3,705	5·53	204·78	270	Jr. 3	.. ..	Mornmoot Monarch 2nd
Preston Daffodil's Fairy ..	41624	7.8.36	17	7,266	4·37	317·76	330	Sr. 4	226 ..	Kyora Mayflower's Fancy
Warragul High School, Warragul, Red Poll (6).										
Gipps Barbara	3120B	31.8.36	4½	6,122	3·89	238·35	350	Mature	230, 166, 293, 216	Woodburn Laureate
Gipps Cherie	4624A	9.9.36	4½	4,891	3·85	188·45	230	Jr. 2	.. ..	Naranghie Wizard
Gipps Dorothea	2875A	28.7.36	12	6,834	4·15	283·51	350	Mature	216, 205, 279, 254	Woodburn Laureate
Gipps Fiona	2388B	12.7.36	10	8,887	3·89	345·29	350	Mature	287, 344, 264, 375	Woodburn Laureate
§Gipps Haidee	3657A	30.8.36	4	4,320	3·87	167·22	330	Sr. 4	238, 261 ..	Gipps Byron
‖Gipps Zulelka	3663A	11.8.36	4	6,049	4·02	243·25	290	Sr. 3	242 ..	Gipps Byron
Williams, F. A., Bamawm Extension, Jersey (7).										
Bamawm Fancy Gem ..	47100	14.8.36	18	6,407	6·43	412·19	250	Sr. 2	357 ..	Bamawm Leon
Bamawm Gladstar's Petal ..	Vol. 24	13.9.36	12	4,823	6·06	292·08	230	Jr. 2	.. ..	Bamawm Leon
Bamawm Mayflower ..	47101	28.8.36	19	7,850	5·73	449·81	250	Sr. 2	390 ..	Bamawm Leon
Bamawm Mistress Peggy ..	Vol. 24	15.8.36	19	6,374	5·85	372·62	230	Jr. 2	.. ..	Bamawm Bonnie Boy
Bamawm Pretty Lady ..	Vol. 24	16.9.36	18	6,026	6·07	365·72	230	Jr. 2	.. ..	Bamawm Master Gaypiece
Bamawm Primrose ..	47102	3.9.36	31	10,124	5·75	581·68	270	Jr. 3	471 ..	Bamawm Bonnie Boy
Taranah Ruby 2nd ..	42120	24.8.36	12	5,507	5·56	306·44	350	Mature	280, 335, 279	Duke of Invermay
Wilmot, J., Pootilla, Jersey (5).										
Banyule Silvermine 58th ..	29032	17.7.36	19	7,202	5·39	388·47	350	Mature	308, 435, 383	Superstrain of Banyule
Uphaven Heather ..	Vol. 24	10.9.36	10½	5,659	5·01	283·67	230	Jr. 2	.. ..	Uphaven Silvermast
Uphaven Miss Grant ..	42333	24.8.36	19	8,204	4·90	402·07	350	Mature	330, 339, 355	Grant's Twylish of Merivale
Uphaven Silvermine 2nd ..	55678	3.9.36	14	6,577	5·02	330·06	270	Jr. 3	306 ..	Wompini Royal Master
Uphaven Tulip	38540	12.8.36	11	6,721	5·02	337·49	350	Mature	383, 395, 361, 377	Grant's Twylish of Merivale
Wilson, A., Port Fairy North, Ayrshire (3).										
Carracoorte Blanche 12th ..	Vol. 29	5.9.36	8½	4,787	5·08	243·11	250	Sr. 2	.. ..	Carracoorte Gerty's Producer
Carracoorte Brownie 22nd ..	24681	1.9.36	14	7,806	4·00	312·31	350	Mature	202, 241 ..	Carracoorte Gerty's Producer
Gowrie Park Music ..	27328	7.9.36	4	7,454	4·13	307·87	290	Sr. 3	.. ..	Gowrie Park Scottish Standard
Wood, J. V. M., Heidelberg, Jersey (6).										
Clarendon Eyre Happy Days' 3rd	52258	23.9.36	22½	9,278	5·65	523·98	270	Jr. 3	371 ..	Clarendon Eyre Oxford Observer
Clarendon Eyre Happy Day's 4th	Vol. 24	1.8.36	15	6,244	5·54	345·81	230	Jr. 2	.. ..	Rochette's Golden (Imp.)
Clarendon Eyre Little Buttercup 7th	52260	13.9.36	15	7,080	5·47	387·31	250	Sr. 2	261 ..	Clarendon Eyre Eminent's Achievement
Clarendon Eyre Merry Widow	42701	20.9.36	16½	7,145	5·92	423·17	330	Sr. 4	270, 279, 351	Viscount of Les Jardin
Clarendon Eyre Rose Marie 10th	52265	12.7.36	21	7,548	6·01	453·74	250	Sr. 2	362 ..	Clarendon Eyre Oxford Observer
Clarendon Eyre Tangerine 10th	52268	24.7.36	17½	7,757	5·23	405·80	250	Sr. 2	272 ..	Rochette's Golden (Imp.)

* 210 days in test (withdrawn). † 240 days in test (withdrawn). ‡ 180 days in test (withdrawn). § 210 days in test. ‖ 248 days in test.

Orchard and Garden Notes (*continued from page 453.*)

Young tomato plants set out now must be protected if any signs of spring frosts are apparent. In the home garden they should be given a warm and sunny position. It is always an advantage, where a few plants are grown, to tie the whole bush up to stakes. It economizes space, and the plants are more readily manured and watered.

Crops of broad and French beans should now be sown. It will be well to lime the seed before covering with soil.

All summer vegetables should now be planted, either from seeds or seedlings; included among them are all of the melon, marrow, and cucumber families.

All-Australian Export Lamb Competitions

CONDITIONS have been drawn up and arrangements finalized by the Australian Meat Board in conjunction with the Council of the Australian Society of Breeders of British Sheep for the holding of an All-Australian Export Lamb Competition during the 1937–38 export season. This will be the first occasion upon which one series of competitions open to all States has been organized. Entries will be judged monthly from September to February inclusive.

Where conditions governing State competitions conducted by various branches of the Society are identical, or are brought into line with those of the All-Australian Competition, entrants in the Commonwealth series will be eligible to compete, not only for the All-Australian trophies and cash prizes, but also for the respective State trophies and cash prizes.

The objects of the competition are the enhancement of the reputation of Australian lambs in the United Kingdom, and the encouragement of producers to breed the types of lambs best suited to the requirements of that market.

The lamb most in demand in the United Kingdom is the "Down" type found mainly among lambs of Southdown strain, but there are also other good marketable types of lambs produced in Australia. The All-Australian competitions will therefore be held for two classes, the first of which will be open to lambs sired by Southdown rams, and the second to lambs sired by other breeds of British rams. Purebred lambs of British breed are not considered a commercial proposition for meat export purposes, and entries will therefore be restricted to lambs bred from rams of British breed (exclusively from flocks registered in the recognized Flock books) and from ewes of any of the following breeds—Crossbred, Comeback, Corriedale, Polwarth, or Merino.

Prizes to be awarded by the Australian Meat Board will be :—

All Australian Grand Champion : Trophy valued at £10 and cash prize of £30 ;

All Australian "Southdown" Champion : Trophy valued at £5 and cash prize of £25 :

All Australian "Other British Breeds" Champion : Trophy valued at £5 and cash prize of £25.

The above prizes will be competed for from entries from every State, and will become the property of the producer who, in the opinion of the Judge, secures the highest aggregate of points with two entries. The "Grand Champion" prizes will be open to all entrants in either class, but the winning entries in this class cannot compete for the "Southdown" or the "Other British Breeds" prizes.

The Australian Meat Board will purchase or arrange for the purchase of all lambs accepted for the competition at the highest "bare meat" price per lb. for "Spring Lamb" of equivalent quality and range of weight realized in Melbourne during the week in which the competition lambs are slaughtered. As a further encouragement to producers to enter the competition, the Board will pay, in addition, a premium of not less than ¼d. per lb. on all lambs accepted for the competition. The competition will be for pens of five lambs selected, if desired, from drafts of seven submitted. Only lambs adjudged of high quality first grade by Commonwealth Inspectors will be eligible to compete.

Judging will take place in London, and will include a block test whereby points will be awarded for distribution of fat and lean meat, as well as for conformation of carcass and suitability to English market requirements.

Every use will be made of the competition lambs for advertising purposes, and special displays will be arranged in retail shops after the judging is completed.

The conditions governing the competitions are set forth on the entry forms which are now available and may be obtained upon application to The Secretary, Australian Society of Breeders of British Sheep, 422 Collins-street, Melbourne, and The Secretary, Australian Meat Board, 419 Collins-street, Melbourne.

Export Pig Competitions

TO encourage the breeding of the right type of pigs for the export market, and as a means of advertising the Australian product overseas, the Australian Meat Board is inaugurating this year competitions for export Porker and Baconer carcasses. Entries for the first competition will close on 15th October next. Carcasses will be judged in London on or about 15th December.

No entry fee will be charged, but only those entries adjudged as of first grade export standard by a Commonwealth Inspector will be eligible to compete. Each entry will include three carcasses.

Prizes to the value of £25 will be provided by the Board for award in each class, and two trophies, each valued at £10 10s., have been donated. The Board will also pay ¼d. per lb. in the case of Baconer carcasses as compensation for depreciation incurred by mutilation in judging.

Entries in the Porker class must be between 60 lb. and 90 lb. dressed weight, and in the Baconer class, between 120 lb. and 160 lb., including heads in each case.

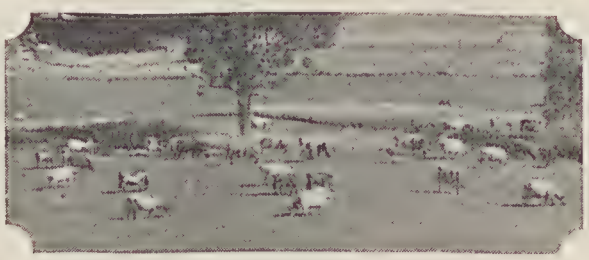
Entry forms may be obtained from the office of the Australian Meat Board, 419 Collins-street, Melbourne, from the Veterinary Officers of the Department of Commerce in each State, and from works treating pigs for export.

Tubercle Free Herds

The following herds have been declared free of tuberculosis under the scheme conducted by the Department of Agriculture. Under this scheme a tuberculosis-free accredited herd of cattle is one in which the entire herd has passed two negative, successive, annual physical examinations and tuberculin tests, or, upon disclosure of infection, three semi-annual, successive physical examinations and tuberculin tests applied by a State Veterinarian or by a qualified and registered veterinarian who is approved by the Chief Veterinary Inspector for that purpose.

ACCREDITED TUBERCLE FREE HERDS.

Herd Number.	Name.	Address.	Number in Herd.	Herd Number.	Name.	Address.	Number in Herd.
1	State Research Farm	Werribee ..	259	6	Lady Talbot Milk Supply Company	Cranbourne ..	418
2	Warragul High School	Warragul ..	35	7	Mailer, Dr. Ramsay ..	"Maneroo," Shepparton	92
3	Payne, A. E. T. ..	"Yarra View," Lilydale	80	8	Reid, Ralph G. ..	"Holmwood," Koo-wee-rup	99
4	Dennis, Mrs. A. A. ..	Frankston ..	14	9	Harris, J. W. ..	"Rowena," Clyde	72
5	Slaney, H. B. ..	Mornington ..	85				



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Department of Agriculture, Victoria

CHRISTMAS PRESENTS

to Friends in Great Britain

WHEN SENDING PRESENTS to friends in BRITAIN at CHRISTMAS, or EASTER, on BIRTHDAYS, or at any time throughout the year, have you thought of VICTORIAN PRODUCE such as FRUIT, WINE, LAMB, JAM, or BUTTER as an acceptable gift ?

THE experience of those who have taken advantage of the Department of Agriculture's forwarding plan is that such gifts from relatives and friends abroad are much more valued than many other articles now sent as presents, and they establish a much closer link between the Australian donor and the Homeland recipient by reason of the fact that the gifts are the products of our own country.

The gifts available and prices charged are as follows :—

	s.	d.
10 lb. of Choice Butter	15	0
24 lb. of Assorted Dried Vine Fruits	20	0
24 tins of Assorted Canned Fruit ..	25	0
1 carcass of Prime Lamb	30	0
24 tins of Assorted Jam	25	0
24 pint bottles Assorted Wine ..	45	0

Closing Date for Delivery by Christmas—

23rd October, 1937

GIFTS of the best Victorian produce can be sent at any time through the Department of Agriculture and arrangements made for delivery to the address given without any further expense than the amounts stated below, which cover cost, freight, and delivery charges.

DURING 1936 the number of gifts ordered was 3,115.

ORDERS to forward any of these to any address should be accompanied by remittances and the date on which delivery is desired, *i.e.*, Christmas, Easter, &c. Orders should be addressed to the DIRECTOR OF AGRICULTURE, Treasury Gardens, MELBOURNE, C.2.

ORDERS for gifts to residents of the Irish Free State and European Countries are not at present being accepted.

The following MIXED Parcels are also available :—

1-lb. Carton of Butter	1 Tin of Apricots
1-lb. ,, Sultanas	1 ,, Peaches
1-lb. ,, Raisins	1 ,, Pears
1-lb. ,, Currants	3 Tins of Jam

for **12s. 6d.**

or the above assortment with the addition of—

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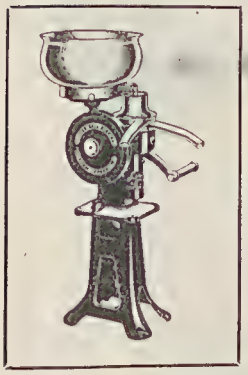

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Machinery Dept.: 613 Collins Street, Melbourne, C.1. G.P.O. Box 4556. LI. 3DH

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The publication contains 140 pages and 100 illustrations

PRICE 1/9 *(Including postage)*

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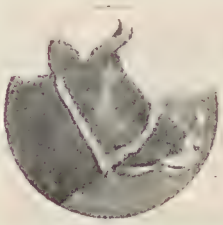
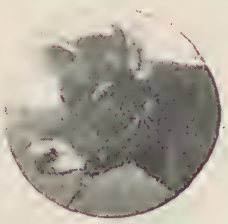


Stud Breeders' CARDS



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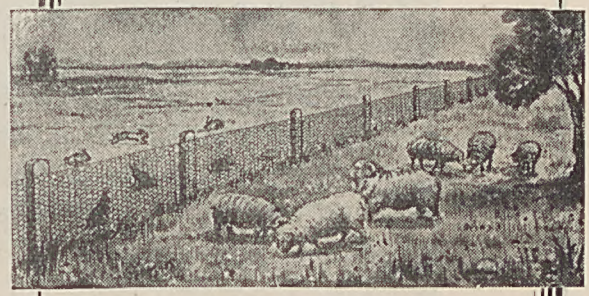

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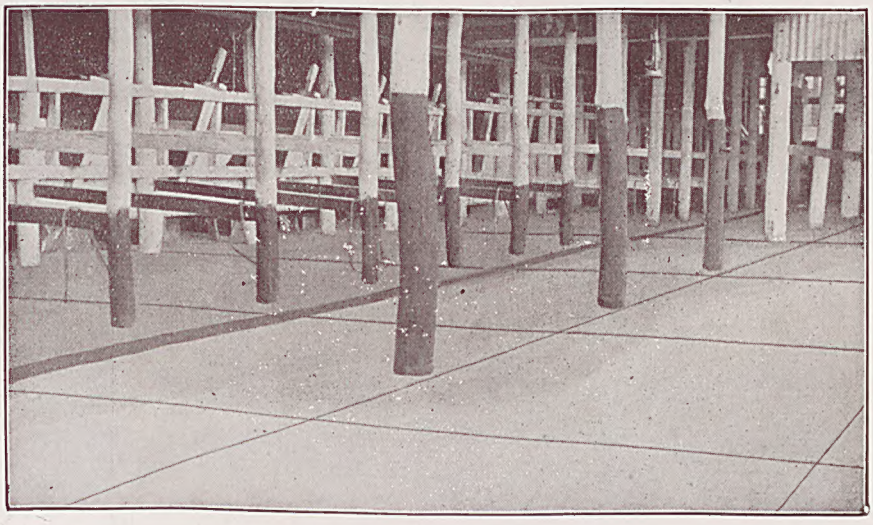

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